

Future ready: accountancy careers in the 2020s

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Emotions and the future of accountancy

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Learning for the future

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The passionate practitioner:
Developing the digitalised small and medium practice

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CONFIDENCE ACCOUNTANCY

Audit and technology

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Machine learning
More science than fiction

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Professional accountants - the future:

Generation Next

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Professional accountants - the future:

Generation Next: managing talent in large accountancy firms

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Professional accountants - the future:

Generation Next: managing talent in finance shared services

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Future ready: accountancy careers in the 2020s

About this report

Drawing on ACCA's collective research over the last three years, thousands of survey responses, interviews, global roundtables and third-party research on the big issues affecting the future of the profession and the world of work, ACCA's report examines what all of this tells us about the trends changing careers in accountancy. It tells a story of opportunity, and of a profession that can be reimagined for the digital age.



About ACCA

ACCA (the Association of Chartered Certified Accountants) is the global body for professional accountants, offering business-relevant, first-choice qualifications to people of application, ability and ambition around the world who seek a rewarding career in accountancy, finance and management.

ACCA supports its **219,000** members and **527,000** students (including affiliates) in **179** countries, helping them to develop successful careers in accounting and business, with the skills required by employers. ACCA works through a network of **110** offices and centres and **7,571** Approved Employers worldwide, and **328** approved learning providers who provide high standards of learning and development.

Through its public interest remit, ACCA promotes appropriate regulation of accounting and conducts relevant research to ensure accountancy continues to grow in reputation and influence.

ACCA has introduced major innovations to its flagship qualification to ensure its members and future members continue to be the most valued, up to date and sought-after accountancy professionals globally.

Founded in 1904, ACCA has consistently held unique core values: opportunity, diversity, innovation, integrity and accountability.

More information is here: www.accaglobal.com

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1. Opportunity


Technology is transforming the global economy. It is changing the very fabric of businesses and organisations. There are other forces at play too, transforming the world of work not just in the future, but right now: globalisation and protectionism, changing expectations of individuals in the workplace, shifting social mores and values, new types and levels of connectivity and demographics.

In the face of all of this change, the greatest imperative facing organisations is to survive and be sustainable for the longer term. There is also more scrutiny. Organisations don't just have to generate sufficient financial return – they have to be better corporate citizens too. Sustainable businesses are, after all, the very lifeblood of a sustainable economy and a sustainable planet.

This imperative presents a golden opportunity for the accountancy profession to build on its strong foundations and evolve: an opportunity to adapt and play its future part in building and protecting businesses and organisations for the long term.

It's a once in a lifetime opportunity to repurpose the profession for the modern world of work and to transform the profession in the minds of a younger generation coming into the workplace who may have misplaced ideas of what a career in 'accountancy' truly means but who have ambitions for vocations with purpose. In today's world, surely there are few greater career imperatives than this?

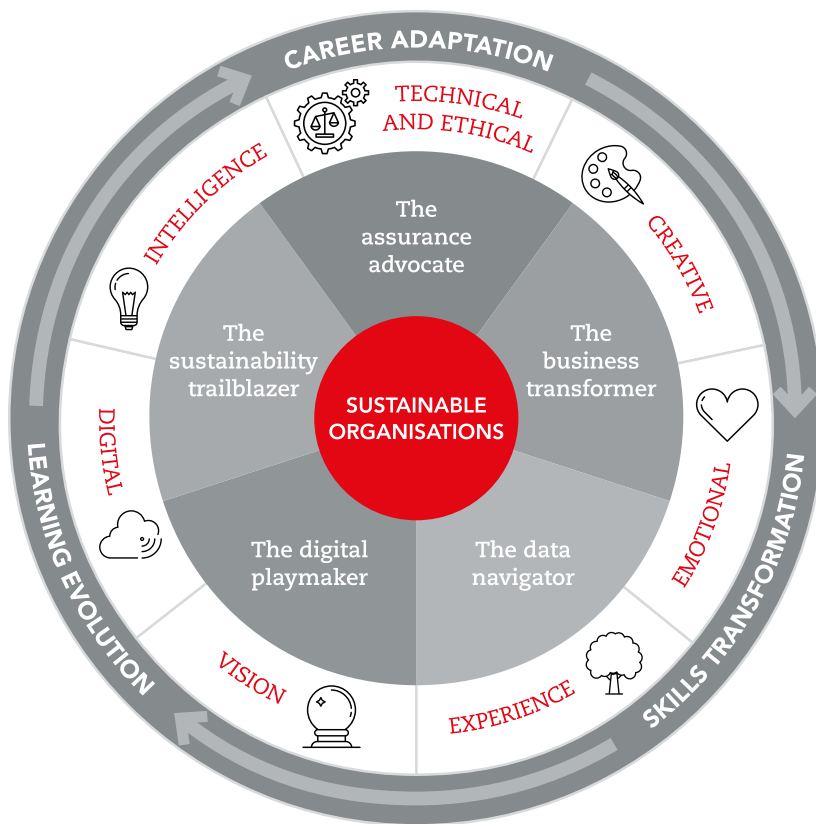
It is a call to arms for accountancy to be reimagined as a profession that can offer brilliant, exciting and meaningful careers to the future workforce, who can play their part in building sustainable organisations fit for the digital age.



2. Accountancy careers in the 2020s

Global trends are transforming the world of work and reshaping the future of the accountancy profession. This is the story of how careers in the profession will adapt, how skills will transform and how learning in the profession will evolve as the profession takes centre stage in building and protecting businesses and organisations in a future sustainable global economy.

FIGURE 2.1: Accountancy careers in the 2020s



2.1 FIVE 'CAREER ZONES' OF OPPORTUNITY IN ACCOUNTANCY

We see five career zones of opportunity in accountancy emerging in the future, all contributing to helping build sustainable businesses (Figures 2.1 and 2.2). These zones represent broad areas of career opportunity in which individuals may develop their accountancy careers, or which they may navigate across (Figure 2.3). Career paths are likely to become more diverse, as individuals continue to learn new skills and reimagine their working lives, as organisations change and new business models emerge, and as technology blurs the work divide between humans and machines. The ACCA professional quotients represent the must-have capabilities needed in this changing environment as different career journeys are taken (Figure 2.4).

ACCA PROFESSIONAL QUOTIENTS – THE CAPABILITIES NEEDED

FIGURE 2.2: The five 'zones' of future career opportunity in accountancy

The assurance advocate

The assurance advocate brings new levels of trust and integrity to organisational operations. They may focus on enterprise risk, helping drive transparency and understanding of emerging issues affecting business performance, or be at the forefront of shaping future forward-looking audit practices as the capabilities of digital tools and technologies expand. They could be driving best practices in emerging control frameworks or helping organisations meet ever-growing regulatory demands or managing complex tax issues. They may even be auditing algorithms in the future. They are essential to the strong stewardship of sustainable organisations for the future.

The business transformer

The business transformer is the architect of organisational change. They could be driving major business change initiatives or transforming finance operations. They may be leading innovative smaller accountancy firms that transform client businesses. They could be exploring growing careers in external advisory services driven by technological innovation and economic growth. Or they may be leading smaller enterprises as digital platforms open the door to new commercial opportunities. They are critical to creating change, driving the strategies of organisations, and supporting sustainable organisations for the future.

The data navigator

The data navigator is a true business partner. They see extraordinary opportunities from the expansion of data and use emerging tech and analytical tools to drive insights that deliver business outcomes and sound financial management of the organisation. They champion ever-growing multi-rich data sets and use smart data to generate brilliant forward-looking analysis to support decision making. This could be exploring new geographic market opportunities or building the case for investment. They understand that the currency of good information is at the heart of building sustainable future organisations.

The digital playmaker

The digital playmaker is a technology evangelist. They see remarkable possibilities for emerging digital tools in transforming the organisations in which they work. They are champions of technology adoption and data governance within the organisation. They look to connect across teams and functions to leverage the power of technology. They may focus on digital implementation programmes or have specialised expertise in particular finance and business technologies. They understand that digital transformation in today's global economy is the lifeblood of future sustainable organisations.

The sustainability trailblazer

The sustainability trailblazer is at the heart of performance management in the organisation. They play a key role in establishing frameworks that capture, evaluate and report on the activities that truly drive value and in ways that are much more transparent and meaningful to the outside world. They will transform management accounting fit for a multi-capital world and see emerging opportunities with better external disclosures to ever-growing stakeholder groups. They understand that aligning the pursuit of profit with the pursuit of purpose is integral to building sustainable future businesses.

FIGURE 2.3: Career pathways in accountancy

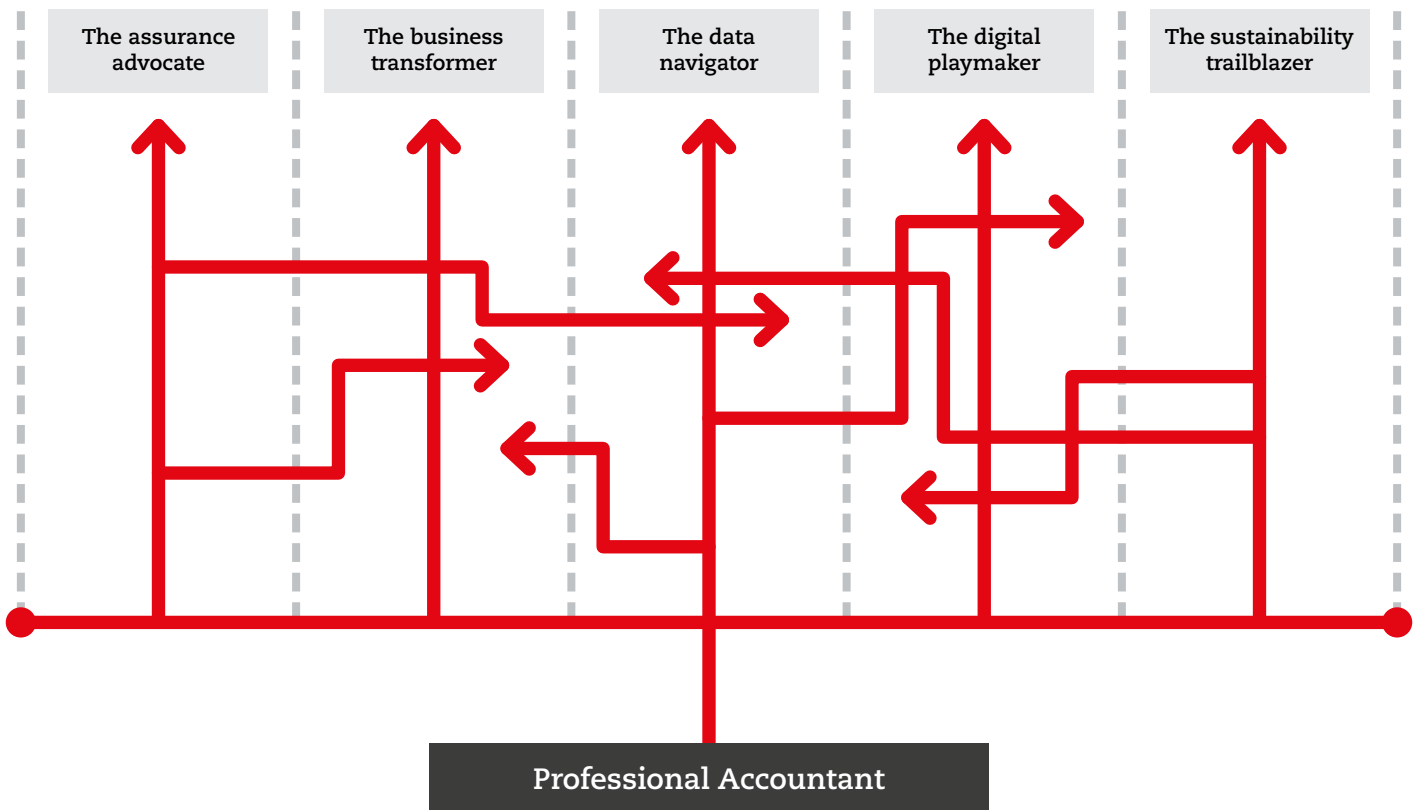









FIGURE 2.4: ACCA professional quotients

 <p>Technical skills and ethics (TEQ): The skills and abilities to perform activities consistently to a defined standard while maintaining the highest standards of integrity, independence and scepticism.</p>		
<p>Creative (CQ):</p>  <p>The ability to use existing knowledge in a new situation, to make connections, explore potential outcomes, and generate new ideas.</p>	<p>Digital (DQ):</p>  <p>The awareness and application of existing and emerging digital technologies, capabilities, practices and strategies.</p>	<p>Emotional intelligence (EQ):</p>  <p>The ability to identify your own emotions and those of others, harness and apply them to tasks, and regulate and manage them.</p>
<p>Experience (XQ):</p>  <p>The ability and skills to understand customer expectations, meet desired outcomes and create value.</p>	<p>Intelligence (IQ):</p>  <p>The ability to acquire and use knowledge: thinking, reasoning and solving problems.</p>	<p>Vision (VQ):</p>  <p>The ability to anticipate future trends accurately by extrapolating existing trends and facts, and filling the gaps by thinking innovatively.</p>



3. Work transformed

The fourth industrial revolution. Political re-orientation, the rise of populism, trade wars and economic challenges, social revolution, demographic shifts, regulatory transformation and technological change. All these forces are coming into play to fundamentally transform how organisations compete and operate, meet ever-changing stakeholder demands, and create long-term sustainable prosperity for stakeholders.

Digital transformation is now core to organisations seeking to build sustainable and viable businesses that are more efficient, more forward looking, and faster to adapt in the face of extraordinary change.

Digital technology is reshaping the global economy and changing the face of today's workplace. For businesses of all sizes and across all sectors, it is transforming channels to market, changing how organisations deliver products and services, providing new opportunities to engage differently with customers and dismantling barriers to entry into markets (ACCA and PwC 2018). Disruptive competitors are appearing from nowhere and challenging long-held corporate positions of market dominance (Figure 3.1). In the public sector governments around the world face continuing challenges, from ever-changing and more demanding public needs, declining public trust and technological disruption.

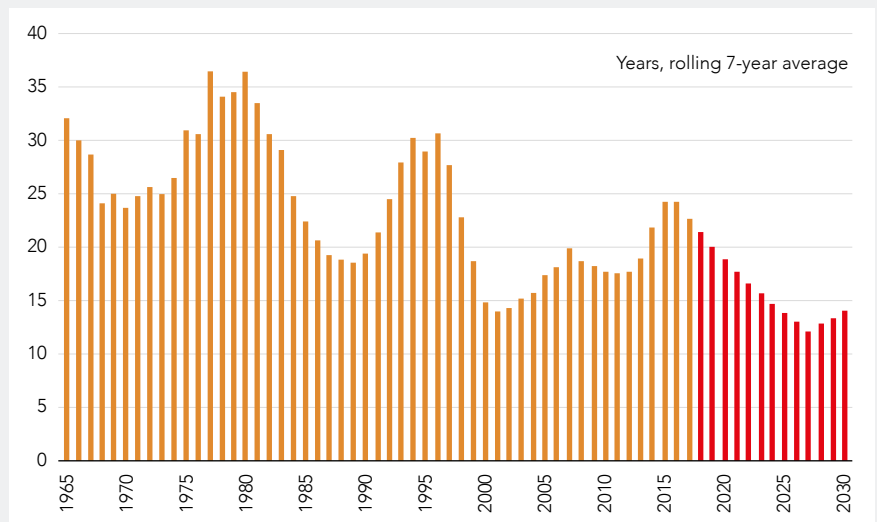
In the face of these growing risks and opportunities, innovation, in particular, is increasingly prized, and organisations must evolve their strategies quickly.

Digital transformation is now core to organisations seeking to build sustainable and viable businesses that are more efficient, more forward looking, and faster to adapt (ACCA and Alibaba 2019). Navigating this terrain to meet changing customer needs or ever-higher public service expectations has never been more important, or more challenging.

These dynamics also require a refocus on the wider capabilities core to the organisation beyond digital, including, of course, human capital. This new world order is turning upside down previously held, well-established norms in the workplace and redefining the very definition of human work that organisations in all sectors need to perform. This transformed workplace is a 'front and centre' issue for the accountancy profession.

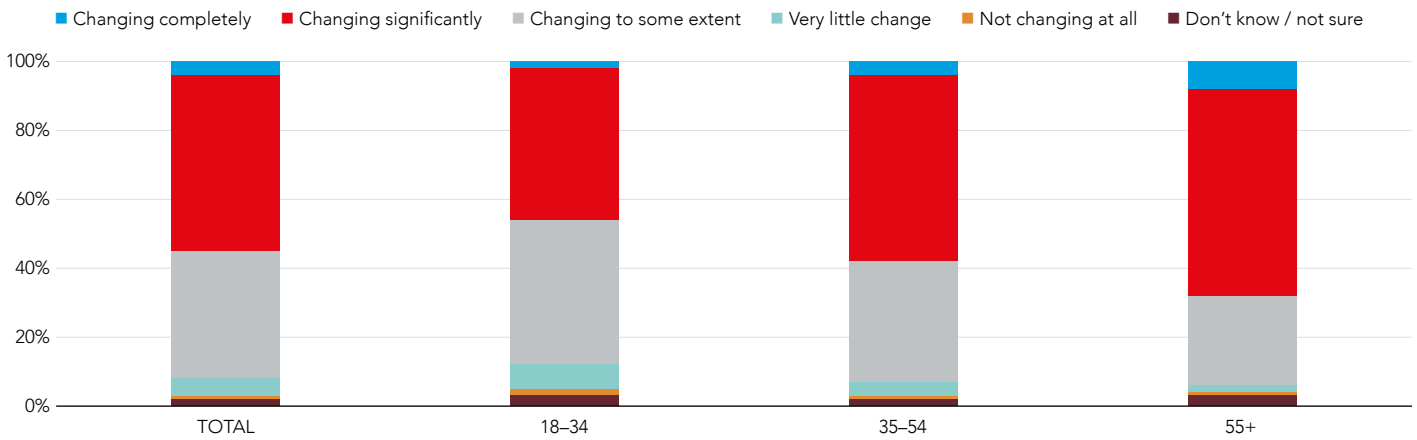
Some forecasters are suggesting that about half of S&P 500 companies will be replaced by 2030.

FIGURE 3.1: Average company lifespan on S&P 500 index



Data: Innosight analysis based on public S&P 500 data sources. www.innosight.com
 Source: Anthony et al. 2018

FIGURE 3.2a: To what extent do you think careers in the profession are changing? (Total and by age)



(Based on 3820 survey responses)

FIGURE 3.2b: To what extent do you think careers in the profession are changing? (Total and by key countries)

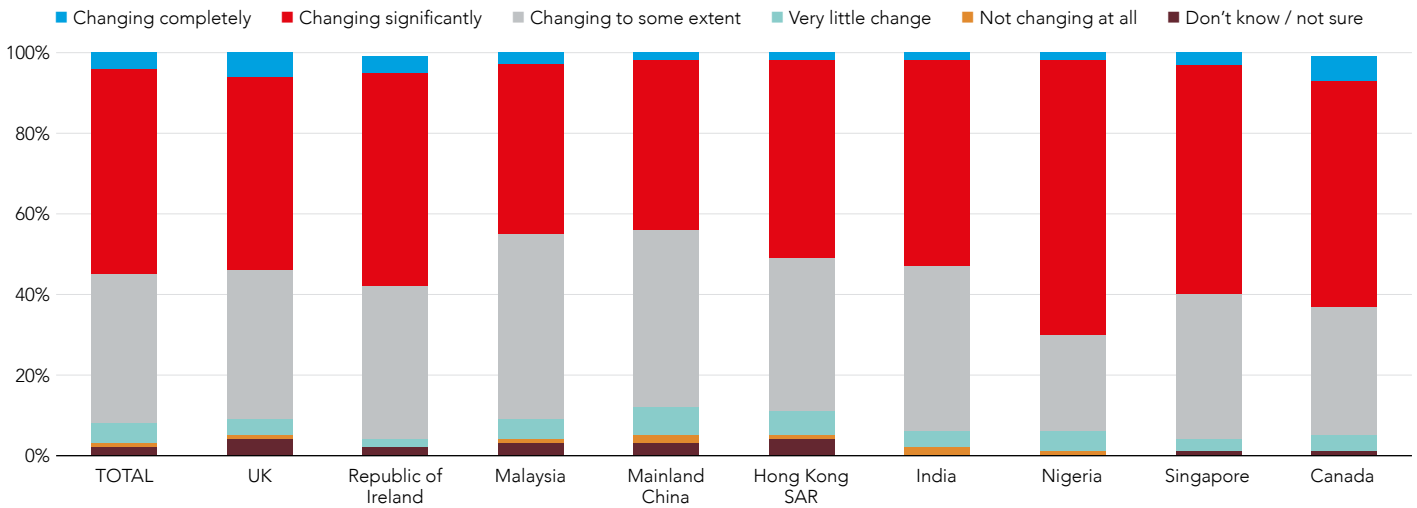
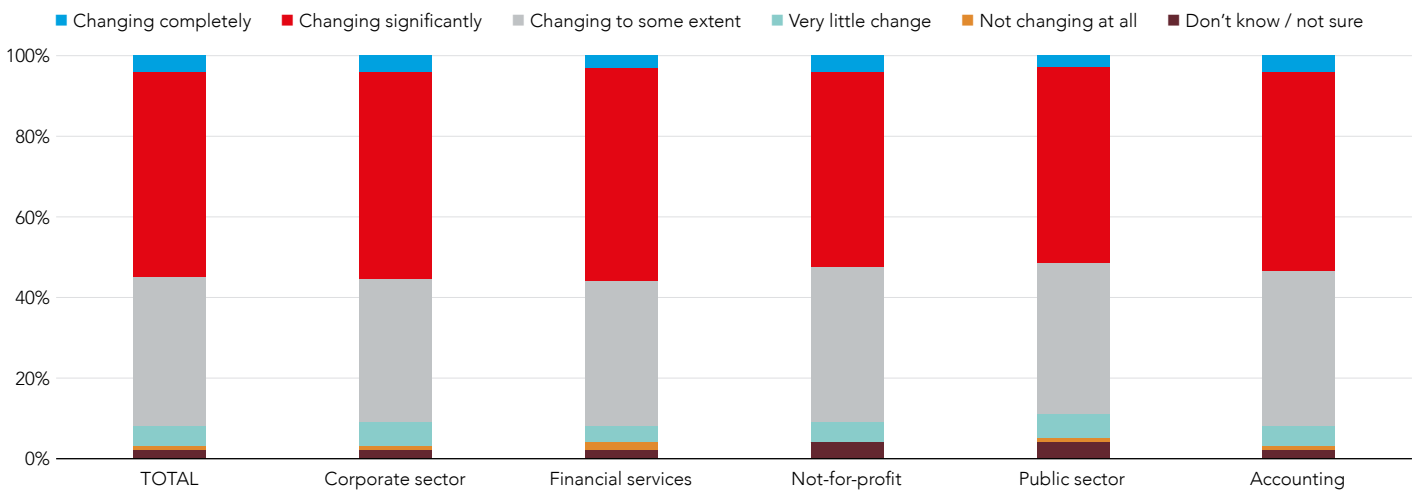


FIGURE 3.2c: To what extent do you think careers in the profession are changing? (Total and by sector)



80%
of respondents see technology innovations as having the most impact on future careers.

3.1 A REIMAGINED PROFESSION?

In this transformed future world, if the profession is to fulfil its future promise, we need to reimagine 'jobs' and think differently and more laterally about what careers could look like, and challenge long-held opinions on work constructs in accountancy. ACCA members are starting to do this already. Broadly they see significant career change as we look forward (Figure 3.2a, b and c) and expect the change to happen quickly (Figure 3.3a and b).

Forget the job 'titles' that accountants perform, or the increasingly diffused types of work with which they may be associated in the future. Digital will revolutionise the reality of work in the profession and bring new 'colour' to how we undertake those activities. The nexus of man and machine, focused on much higher-value work across the profession, should make work more efficient, more productive, more interesting, and more meaningful. Even over the next three to five years, ACCA members see technology innovations as significantly impacting careers (Figure 3.4).

FIGURE 3.3a: How quickly do you expect the change in careers to happen? (Total and by age)

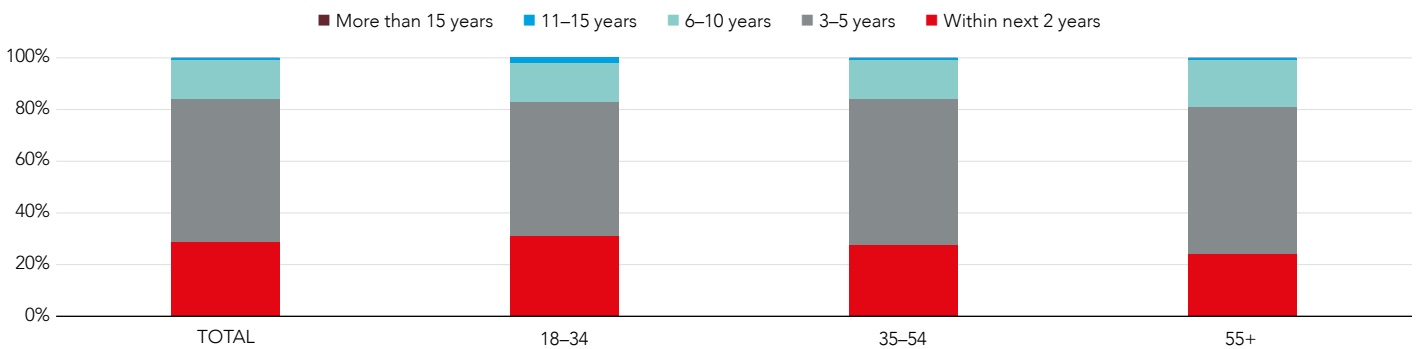


FIGURE 3.3b: How quickly do you expect the change in careers to happen? (Total and by countries)

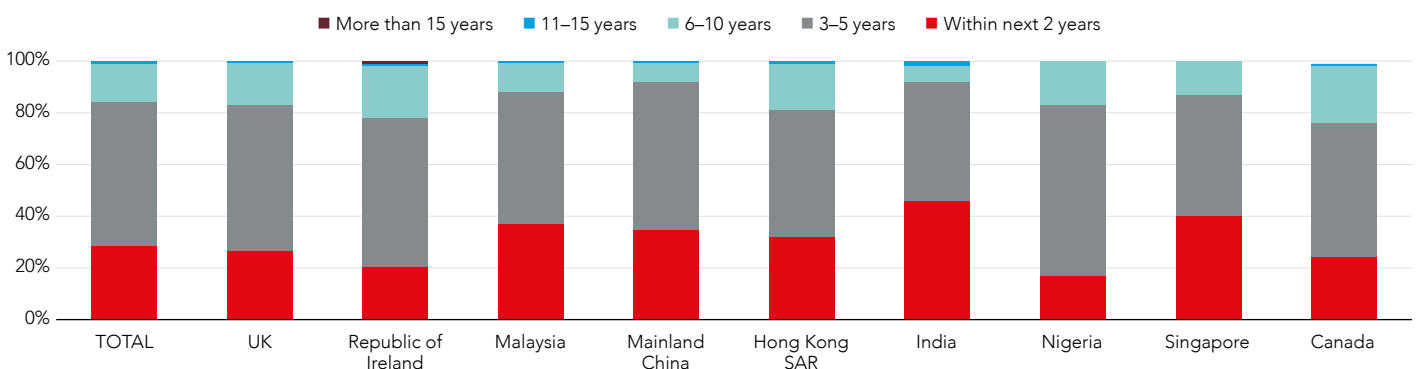


FIGURE 3.4: Top five factors that will have most impact on careers in the profession, according to ACCA members



(Based on 3494 responses)

79%
of members in the survey
agreed that accountants
will move into more
diverse career paths.

3.2 CAREER PATHS ADAPT

In this emerging world, ‘jobs’ in the profession become more flexible and it’s perhaps more difficult to plan out what the next job role may be, for both employer and employee. This is a workplace in transition, where the classical delineation of well-trodden career pathways becomes less recognisable, and where ‘jobs’ are redefined as work activities quickly change and parts of jobs are re-apportioned to machines.

As jobs transition, new and more amorphous career journeys in the profession are likely to arise. They could be seen as a series of linked career experiences but not always following traditional career paths (Figure 3.5 and 3.6). This doesn’t necessarily suggest the end of highly specialised technical roles, and some ‘traditional’ career pathways will still exist, but it does suggest growing permeability, different stepping stones and pathways across many future roles.

FIGURE 3.5: Do you expect to become more specialised or would you rather build a portfolio of experiences across the profession? (Total and by key countries)

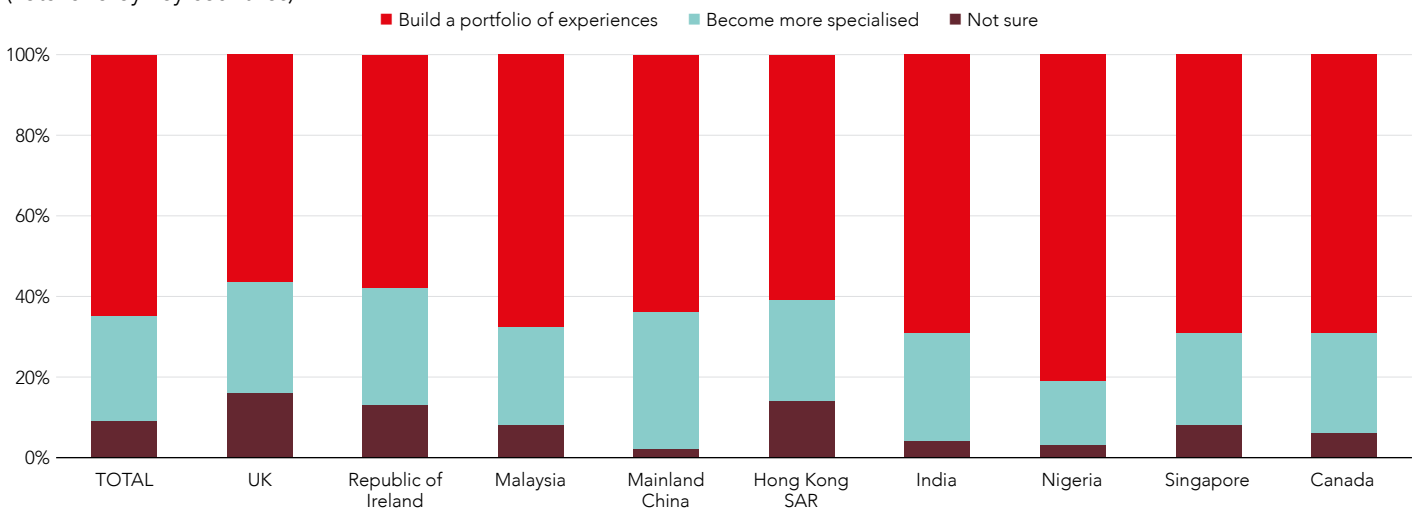
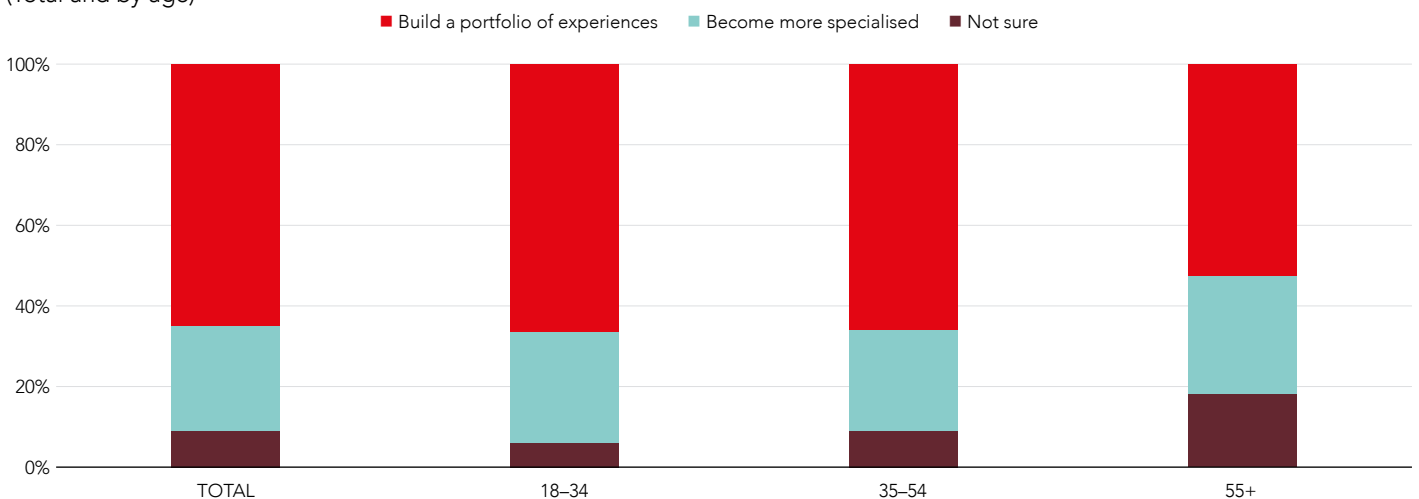


FIGURE 3.6: Do you expect to become more specialised or would you rather build a portfolio of experiences across the profession? (Total and by age)



For individuals, this transformed world of work demands a different mindset, augmenting their skills with emerging technology as they transition through their working lives and adapt more quickly to fast-moving and different career paths.

These changes may also present considerations for how teams are designed too. Finance teams of all descriptions need to reconsider how they support careers and design 'jobs' for accountants in the face of evolving work strategies. We can expect teams across organisations to be more collaborative, permeable, more fluid (Deloitte 2016a), and possibly less anchored to traditional organisational function structures in a world where business models are also rapidly evolving (ACCA 2017a). For individuals, this transformed world of work demands a different mindset, augmenting their skills with emerging technology as they transition through their working lives and adapt more quickly to fast-moving and different career paths. The bottom line is simple: the 'job for life' is a relic of the past.

The Age of Automation Artificial Intelligence, robotics and the future of low-skilled work

'In most cases, AI and robotics will automate individual tasks rather than whole jobs. And because jobs usually encompass a range of functions, the automation of one task means workers will be able to pivot into new roles'. ■

Source: Deloit and Wallace 2017



Leading the social enterprise: Reinvent with a human focus

From jobs to superjobs.

'A vast majority of organizations told us they expect to increase or significantly increase their use of AI, cognitive technologies, robotic process automation, and robotics over the next three years. As organizations adopt these technologies, they're finding that virtually every job must change, and that the jobs of the future are more digital, more multidisciplinary, and more data- and information-driven. Paradoxically, to be able to take full advantage of technology, organizations must redesign jobs to focus on finding the human dimension of work. This will create new roles that we call 'superjobs': jobs that combine parts of different traditional jobs into integrated roles that leverage the significant productivity and efficiency gains that can arise when people work with technology'. ■

Source: Deloitte 2019

Navigating new career opportunities drives a continual skills transformation. It's a story of transition, and constant renewal of experience and knowledge, and rebalancing of skills.

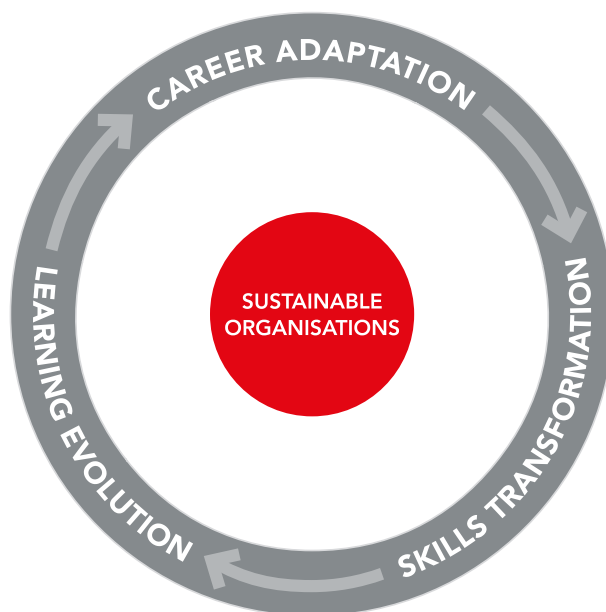
3.3 SKILLS TRANSFORM

Navigating new career opportunities drives a continual skills transformation. It's a story of transition, and constant renewal of experience and knowledge, and rebalancing of skills. What will be the skills most prized in this emerging environment? As previously noted, prior research (ACCA 2016a) has highlighted seven 'stand out' professional competencies or quotients that tomorrow's accountants will need to progress their careers and add most value for employers and clients in this changing world (Figure 2.4 on page 9). These are sector and industry neutral, and provide a blueprint for individuals entering the profession for future-proofing their own career journeys. The professional quotients identify the ever-changing mix of capabilities needed by professional accountants as the profession continues to transition, and as roles and responsibilities morph and evolve.

3.4 LEARNING EVOLVES

With future jobs in the profession becoming technology and data rich within and across career zones, different combinations of quotients across roles and careers will be required, and will need to be continually reassessed and developed. Continual skills transformation holds significant implications for how we learn. It demands new types of learning support that are more developmental and experiential. Learning becomes more agile and in the 'now' (ACCA 2018a). Organisations will need to transform their approach to learning as individuals increasingly self-curate, using ever-expanding information sources and learning options to drive their own personal career journeys; it's important for individuals to 'unlearn' too, as some things become less relevant (Figure 3.7).

FIGURE 3.7: Career adaptation driven by the sustainability imperative



Finance: a journey to the future?

Career paths will also continue to evolve – in line with the 'macro' trends we are seeing globally (flexible working, increased life expectancy, lifelong learning). Career paths will be difficult to predict more than two to three years in advance. Pathways will move further away from the formal route – and having mechanisms to allow people to 'step on' and 'step off' their career paths will enhance the value of the people in the finance function. Organisations will start to think about what broader skills they want their employees to have, no matter which part of the business they sit, and then allow that fluidity between finance and the rest of the business. ■

Source: ACCA and PwC 2019



'I think one of the biggest issues we have is... identifying people in roles and just confining them to role. I think the biggest change that is happening is particularly the advent of technology coming in, you're requiring people to have a horizon of maybe one or two years, then they have to reinvent themselves and become something else'.

Roundtable participant

'I've seen broadening job roles... and I am seeing fluid mobility'.

Roundtable participant

'In the past you had those defined roles, CFO, trainee accountant, which were there for decades, they didn't change. Now we're in a situation though where the roles of the future aren't even defined. I don't even know what they are. And this is not unique to accountancy. We don't know now because technology is going to dictate to a large extent what those roles may be... so I think that's important for us to try and... and support those people as they learn to adjust to a new world, which is difficult because we can't articulate what that new world is yet, and we may not be able to for some time'.

Roundtable participant

'There are still many people who want to be a partner in a professional services firm. But there are also lots of people who really [are] good people really talented people who don't want that...who want something very different. The career offer to people being about how we can kind of build a really flexible set of skills and then they can deploy and more easily move between different areas. I think we're in a transition period'.

Interviewee

'Everybody has a side game going on'.

Roundtable participant

'The career trends we are now seeing – if you want to be in senior roles you need an interdisciplinary background'.

Roundtable participant

'Roles before were siloed...but now the controller is doing something else in addition to their day to day role...'

Roundtable participant

'As an [accountancy] professional you really need more skills like valuation and advisory knowledge and all that cannot be understood or learned just being in a single service line'.

Interviewee

'People look 18 months ahead in their careers...there's not the assumption any more that if I go into an accounting firm there's a single pathway to partnership. They are picking up signals from the world that say there's no way I can plan 10 or 15 years away'.

Interviewee

'We need to become very digitally literate and have an interdisciplinary mindset'.

Roundtable participant

'We equip them with some core skills, they develop skills on the job that are then transferable, then we would look to assign them to another business area such as tax or our financial advisory business rather than keeping them on the tracks that traditionally we may have done'.

Interviewee

'A generation where we've written job descriptions and we've had this fixed idea what a role is, are we moving to a point where actually we should be thinking outside of that: do you have the skills and talent to play your part in the organisation?'

Roundtable participant



4. #20 trends shaping future careers?

Fast-changing technology, evolving societal imperatives and demographic transitions are all contributing to a profession which could be different as we look forward. ACCA's global research team continues to explore and examine different issues shaping the profession in future. What are the possible trends shaping the future of careers, and how could these change the face of the workplace for professional accountants in the future?

<p>#1 The meaning of work Purpose and meaning from work becomes important</p>	<p>#2 Connectivity Digital drives 'never seen before' new opportunities to collaborate</p>	<p>#3 The A word Automation frees up professionals to focus on higher-value work</p>	<p>#4 'Emtech' Emerging technologies redistribute work between man and machine</p>	<p>#5 The rise of data Data possibilities become ever central to the roles of professional accountants</p>
<p>#6 Generation Z A new tech savvy generation enters the profession</p>	<p>#7 Longevity An older workforce and 5 generations in the profession enrich the talent base</p>	<p>#8 Beyond the lattice? Career paths become much less obvious and more variable</p>	<p>#9 Rent a CFO? The rise of the gig economy changes the composition of teams</p>	<p>#10 Command to collaboration Flatter structures, collaborative teams, virtual working</p>
<p>#11 CV R.I.P? Future CVs focus on skills attained not job titles acquired</p>	<p>#12 Skills transformation As careers adapt, ACCA's professional quotients rise in relevance</p>	<p>#13 Continuous learning Professionals need to continuously reinvent themselves and re-learn</p>	<p>#14 Learning culture Learning culture at work evolves in the face of skills transformation</p>	<p>#15 Digital learning Technology drives an explosion in learning opportunities</p>
<p>#16 Inclusivity Accounting teams become more diverse because it makes good business sense</p>	<p>#17 Business models innovate Professional accountants have new opportunities as business models change</p>	<p>#18 Trust and ethics There is a growing need to trust, a refocus on ethical behaviour in the stakeholder society</p>	<p>#19 Multi-Polar world The rise of cities and shifting economic power provides new career opportunities</p>	<p>#20 Digital recruitment Technology is transforming recruitment models and networking opportunities</p>

More meaningful work can translate to better employee engagement, a more attractive brand proposition for potential new recruits and a competitive edge in the race for talent.

4.1 THE MEANING OF WORK

With increasing demands for organisations to demonstrate wider social purpose, and evidence that enterprises more committed to wider corporate social imperatives can drive superior performance (Clark et al. 2015) it makes sense to provide work that is engaging and meaningful. More meaningful work can translate to better employee engagement, a more attractive brand proposition for potential new recruits and a competitive edge in the race for talent (ACCA 2018b). In previous research (ACCA 2016b), interesting work was cited as one of the key attraction and retention factors for younger finance professionals.

□ *‘The younger generation...they will leave a job that they don’t feel they are getting a purpose from or making a difference’.*

Roundtable participant

□ *‘As an employer we want to inspire people to come to work rather than it being just for a pay cheque’.*

Interviewee

Organisations with purpose understand their role in providing career opportunities and upskilling the next generation, and increasingly this will be seen as fundamental in contributing to building the social fabric of a sustainable

global economy. They also recognise that digital transformation focused simply on creating new efficiencies, cutting cost and displacing labour is a race to the bottom. Developing human talent with emerging technologies is key to creating sustainable advantage in the future.

For future generations of professional accountants, meaningful work will matter. From contributing to the effective management of risk and helping organisations understand the implications of emerging data in sustainable decision making, through managing regulatory challenges with greater efficiency, contributing to measuring and reporting on sustainability initiatives, helping deliver better service outcomes in the public or third sector, or ensuring public interest needs are met through supporting capacity-building initiatives in emerging markets – there is a growing, purposeful opportunity in the types of work professional accountants can do in the future.

□ *‘Professional accountants are a core part of this collaborative ecosystem of actors taking on these challenges, as they work to support effective public service delivery, business growth and a transition to high value and sustainable development – while at all times working to protect the public interest’.*

(ACCA 2018b)

'I think retention is as much about opportunity and offering meaningful work and the chance to be mentally stimulated'.

Roundtable participant

**4.2 CONNECTIVITY
(AS WE HAVE NEVER KNOWN IT)**

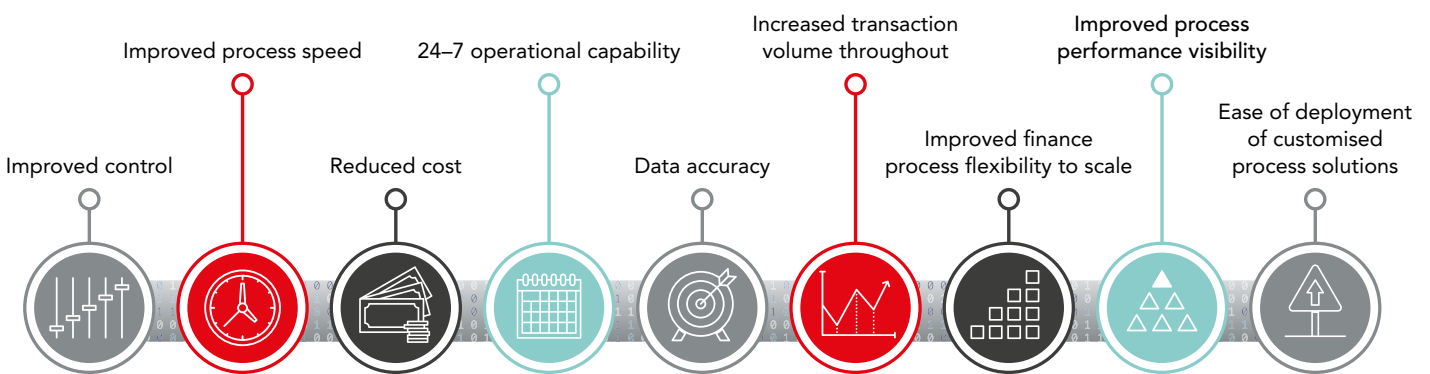
The combination of the burgeoning internet of things (IoT), the shift from 4G to 5G (Pring et al. 2019), and the rise of new emerging communication tools and technologies are driving instantaneous communication possibilities at global reach. Hyper-connectivity will provide the workforce and professional accountants with new possibilities for sharing, connecting, empowering, challenging, and adding value to organisations of all sizes and sectors, virtually and instantaneously. The quicker transmission of information flows should drive productivity and aid better and speedier decision making across all sectors of the profession. But it will also place new demands on professional services firms in responding to changing and ever-evolving client needs. Clients are more sophisticated, there is more opportunity to self-serve, and access to more reliable information. The power to connect in the profession has never been greater, supported by an avalanche of emerging platforms and technology-driven networks entering the marketplace.

The world is awash with applications such as Slack, Trello, Workzone, Taskworld, Skype, Workplace which are changing the dynamic of how teams operate and how they share. Think about the chief financial officer (CFO) whose mobile tablet provides instant dashboard metrics and 'drill-down' capabilities on organisational performance; think about the risk manager with access to digitally captured enriched data sets and real-time information on risk modelling to provide real-time insights on emerging risks.

4.3 THE A WORD

Any conversations on technology in the profession usually start with the A word – 'automation'. The impact of automation on the profession is well versed. The application of emerging automation tools to reduce cost, improve control and deliver a whole range of other benefits is very evident (Figure 4.1) The redistribution of work and application of relatively 'dumb' technologies to routine, transactional, repetitive tasks frees up professional accountants to turn their gaze towards more interesting and value-added work.

FIGURE 4.1: The benefits of robotic process automation



Source: ACCA 2018a

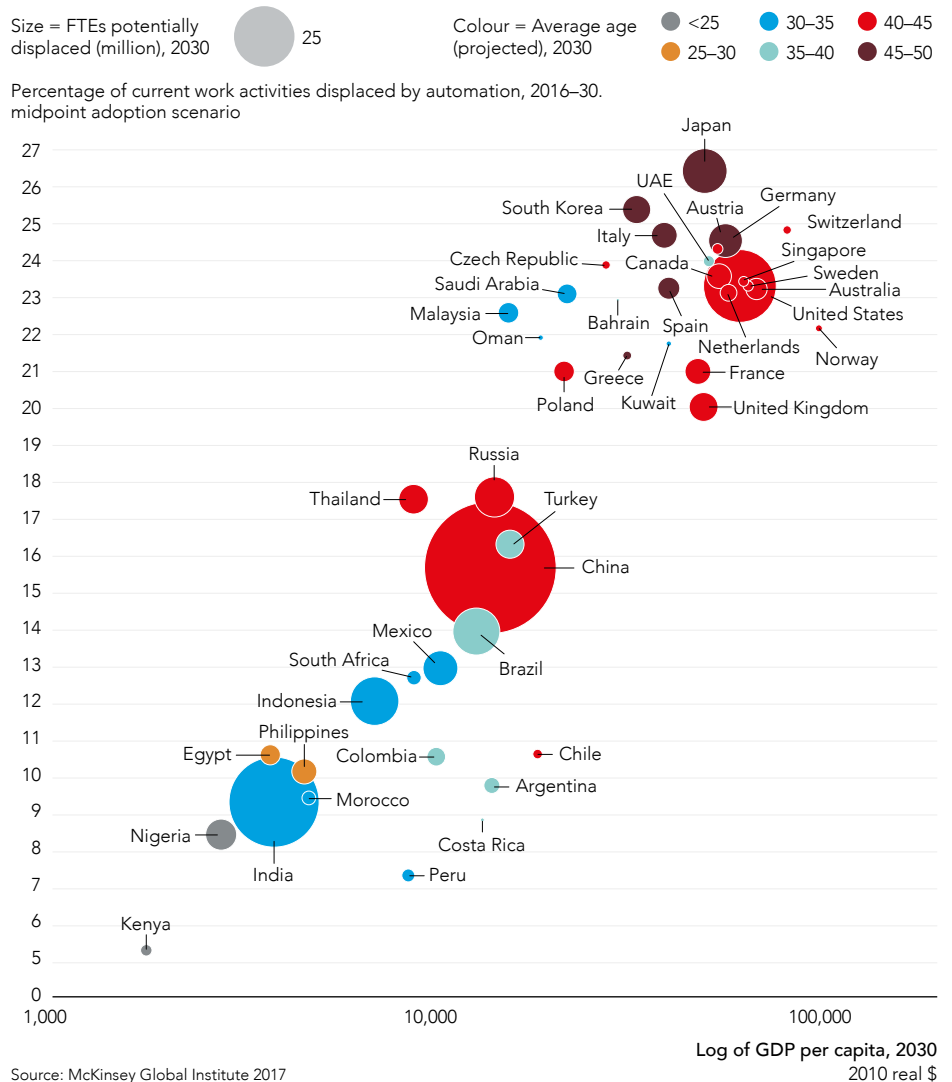
The general direction of travel with automation is known, and its impact on the profession will be significant. It will shape the types of work professional accountants do: less of the 'heavy lifting' and more a recalibration of the tasks professional accountants will and will NOT perform in the future.

But automation is widely misunderstood, and most importantly isn't new. We have had automation in finance and the accountancy profession for some time, but it is the scale of possibilities of adoption now extending across tasks from new emerging robotics technologies that is creating a new automation narrative, and we will see different waves of automation of varying sophistication continue (PwC 2018).

The automation picture is also nuanced and the playing field is uneven across countries and sectors (Figure 4.2). Broadly, those with older populations

are projected to see higher rates of automation displacement. Developing economies are generally behind the automation curve, and localised economic factors, risk and return parameters for capital and labour cost, legal, political and social constraints all influence automation take-up in different countries. Yet the general direction of travel with automation is known, and its impact on the profession will be significant. It will shape the types of work professional accountants do: less of the 'heavy lifting' and more a recalibration of the tasks professional accountants will and will NOT perform in the future.

FIGURE 4.2: Impact of automation varies by a country's income level, demographics, and industry structure



Clever emerging technologies ('Emtech') are increasingly blurring the work divide between human and machine, rescaling productivity possibilities and allowing us to re-imagine what we can do in the profession.

4.4 'EMTECH': RESHAPING THE ART OF THE POSSIBLE?

The new 'world of work' in the profession is technology driven. And clever emerging technologies ('Emtech') are increasingly blurring the work divide between human and machine, rescaling productivity possibilities and allowing us to re-imagine what we can do in the profession. AI technologies spanning areas such as machine and deep learning as well as natural language processing, technologies leveraging motor skills, such as drones or humanoid robots, distributed ledgers or Blockchain (ACCA 2017b), cryptocurrencies, FinTech and the IoT are all reshaping our evolving view of the art of the possible. The arrival of the digital core, in particular, is for many organisations a point of inflection (ACCA 2019a) that changes the speed and scale of decision making, providing the technological architecture for collaborative working and better insights.

“Technology is one of the biggest drivers, disruptors and enablers in the profession”.
Interviewee

The speed and self-service possibilities of application development continue to gain traction, voice recognition technology continues to improve, and increasing data transmission speeds will all work together to drive previously unseen levels of productivity and value of work. From improving audit practices' ability to identify fraud to invoice scanning and bank reconciliations, or from resolutions of complex tax questions to an enhanced understanding of the value being created by business, these emerging technologies will increasingly redistribute the burden of work, enabling professional accountants to focus on the tasks and activities that make a difference (ACCA and CAANZ 2019b).

“In an increasingly technology-led future, sustainable advantage will not come by trying to replicate the tasks of, or compete with, machines. It is more likely to come by leveraging the competitive advantages inherent in our humanity – in effect by being human in the digital age”.
(ACCA 2018d)



Technology-driven innovation

Technology-driven innovation – the ability to deliver new business results through opportunities discovered by continuously experimenting with technology, both emerging and established – will soon be table stakes for leading organizations. Tech-driven innovation magnifies the importance of technology (and, thus, IT). But it requires companies to operate and organize differently. IT will follow the broader organizational future of matrixed, shape-shifting organizations that form and morph to changing priorities. This goes beyond DevOps. The boundaries between what is IT and what is the business are already fading to reveal a much more powerful and fluid IT capability. This more embedded, connected, and adaptive IT approach will gain momentum in 2020 – particularly as firms address the opportunity and challenges of emerging technologies. ■

Source: Forrester 2019

In the information age, data possibilities are reshaping the roles of professional accountants across all sectors and providing new, exponential opportunities to help businesses grow and add value.

4.5 THE INEXORABLE RISE OF DATA

Structured, unstructured, internal, external, financial, non-financial: from the advent of business intelligent warehouses to cloud and on-premises data repositories to the next evolution in data transformation supported by the advent of the digital core; from the increasing availability of open trusted data and clamour for one source of data truth to growing enterprise data lakes driven by the expansion of the IoT. Add in growing storage possibilities in the cloud, and the possibilities afforded by Data Cognition Engines to dramatically change enquiry possibilities in ever-expanding data sets. In the information age, data possibilities are reshaping the roles of professional accountants across all sectors and

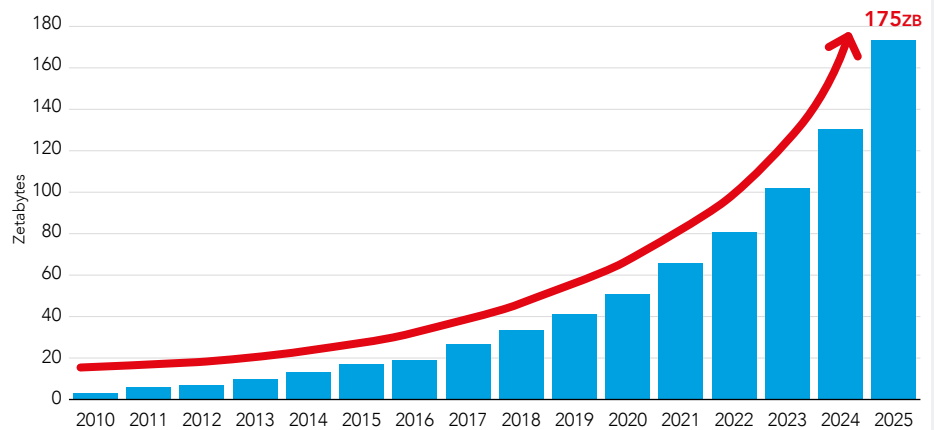
providing new opportunities to help businesses grow and add value. Data analytics has the potential to transform careers in the profession as super business intelligence technologies emerge: deeper and faster predictive insight on organisation performance, better and quicker risk-assessment practices, clearer understanding of causality in social and environmental impacts, more refined and accurate investment appraisal, more efficient regulatory and compliance adherence. Data is 'the single most important and non-negotiable requirement for powering the use of Machine Learning' (ACCA 2019a) and a 'key factor promising a transformation of the audit profession' (ACCA and CAANZ 2019b).



Global datasphere expansion is never-ending

'IDC has defined three primary locations where digitization is happening and where digital content is created: the core (traditional and cloud data-centres), the edge (enterprise-hardened infrastructure like cell towers and branch offices), and the endpoints (PCs, smart phones, and IoT devices). The summation of all this data, whether it is created, captured, or replicated, is called the Global Datasphere, and it is experiencing tremendous growth. IDC predicts that the Global Datasphere will grow from 33 Zettabytes (ZB) in 2018 to 175 ZB by 2025' (Reinsel et al. 2018). ■

FIGURE 4.3: Annual size of the global datasphere 2010–2025



Source: Reinsel et al. 2018

‘Generation Z have a very clear purpose to make an impact that matters. That manifests itself through our actions with our clients, our people, in our communities’.

Interviewee

4.6 GENERATION Z

The ascent of the next generation in the profession is already happening. ‘Digital natives’ may bring new perspectives and different aspirations to the profession as they enter the workforce. Their aspirations will influence the shape of careers in the profession and how business leaders in all sectors adapt their workforce strategies to accommodate a new generation of talent coming in. This is the first generation raised on mass social media networks, the growth of the internet and ubiquitous use of mobile devices: they have an unprecedented capacity to communicate through social media and live their lives via touchscreen technology. They have grown up or are growing up in an ‘always switched on’ digital environment. Some indicators so far suggest they are a generation that wants meaning and purpose in both their personal and professional lives, and there are some early signs that suggest they prefer more work stability than the generation that has

preceded them (Stahl 2018). Here we need to be careful not to draw too many observations or simple representations of what this emerging generation want or need from their working lives or careers. It is early days, and it will be important for organisations to track these emerging sentiments over time, and reflect on the implication for employer strategies that successfully engage with them. Generation Z’s entry to the workforce presents a significant opportunity for accountancy to be reimagined and to be seen as a brilliant career foundation.

‘Technology for them, it’s just natural. It’s not even something that they feel they have to talk about necessarily because they use it. And it’s an integral part of their lives, but they use it in a certain context. Interestingly enough, it’s used more for their personal lives. And I guess what we’re trying to do is open up their minds to the possibilities for what it might look like in a business context’.

Interviewee



Identifying what matters most to the next generation

- A high degree of economic and career conservatism among Gen Z across the globe, which is evidenced in their top public policy priorities—economic stability, education and jobs—and their top career priorities—a stable career path, and salary and benefits expectations.
- Gen Z are deeply divided on whether their governments should prioritise international collaboration or a nationalist approach to key public policy issues, with diverse views between countries.
- The accounting profession is well positioned to attract Gen Z talent, delivering on many of their top priorities, including stable career paths and competitive salary and benefits. A large cohort are still deciding on their career plans, and say they would consider a career in accountancy.
- Gen Z anticipate digitalisation and emerging technology will be a double-edged sword, both bringing new ways of doing things, meaning new and more interesting jobs, but also seeing traditional jobs declining as a result. ■

Source: IFAC 2018 (Survey based on a survey of 3,388 individuals between the ages of 18 and 23 in G20 countries)

We are transitioning into a workforce with five generations in the workplace, from veterans and baby boomers, through to Generation X, the Millennials and now Generation Z.

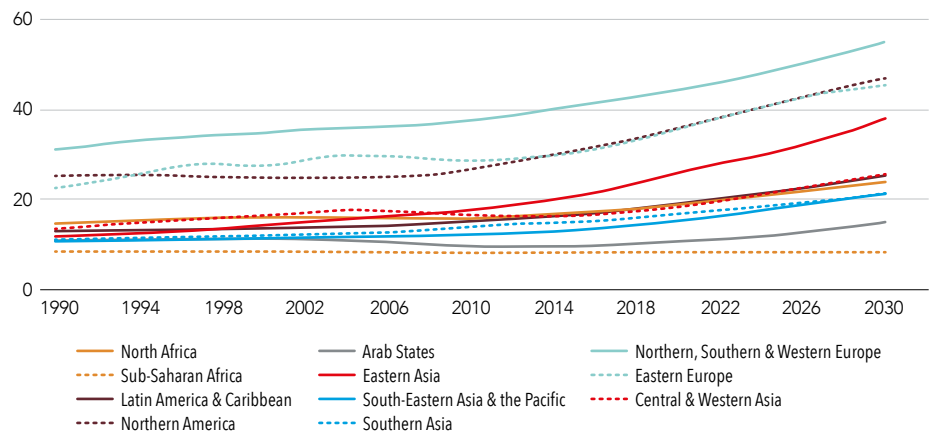
4.7 LONGEVITY

The traditional pattern of 'education, work, and retirement' was framed in an age where life expectancy was shorter. According to research from London Business School (Gratton and Scott 2017), as life expectancy increases, lives have become less in 'lockstep', ie previously, workers transitioned from education to work, and then from work to retirement at the same time. The number of people reaching the age of 100 has quadrupled in the past 30 years, and is likely to quadruple again by 2035 (Cook 2017). Individuals can expect to be in the workplace much longer because retiring in their mid-sixties will not be financially viable for most. And in a world of emerging and mass technological change, the education we receive as children is

unlikely to be future-proof for careers that span many decades. We will all need to reinvent ourselves in our future careers.

We are transitioning into a workforce with five generations in the workplace, from veterans and baby boomers, through to Generation X, the Millennials and now Generation Z. This has potentially profound implications for how employers manage inter-generational talent and engagement. By 2050 it is estimated that the number of people over 65 years old will triple and the number of those over 80 will quadruple (Mercer n.d.). Birth rates in many mature economies are falling, meaning we will see potential shortages and changing demographics with different compositions of people in the workforce. Across the accountancy profession these demographic shifts have implications:

FIGURE 4.4: Old-age economic dependency ratio



Note: The old-age economic dependency ratio is the ratio between the elderly population (+65) and people in the labour force. Source: ILOSTAT, ILO Labour Force Estimates and Projections, 2017; UN World Population Prospects, 2017 Revision

‘The changing composition of the workforce in the profession may also signal different entry and exit points and pathways in and out of jobs in the profession’.

Interviewee

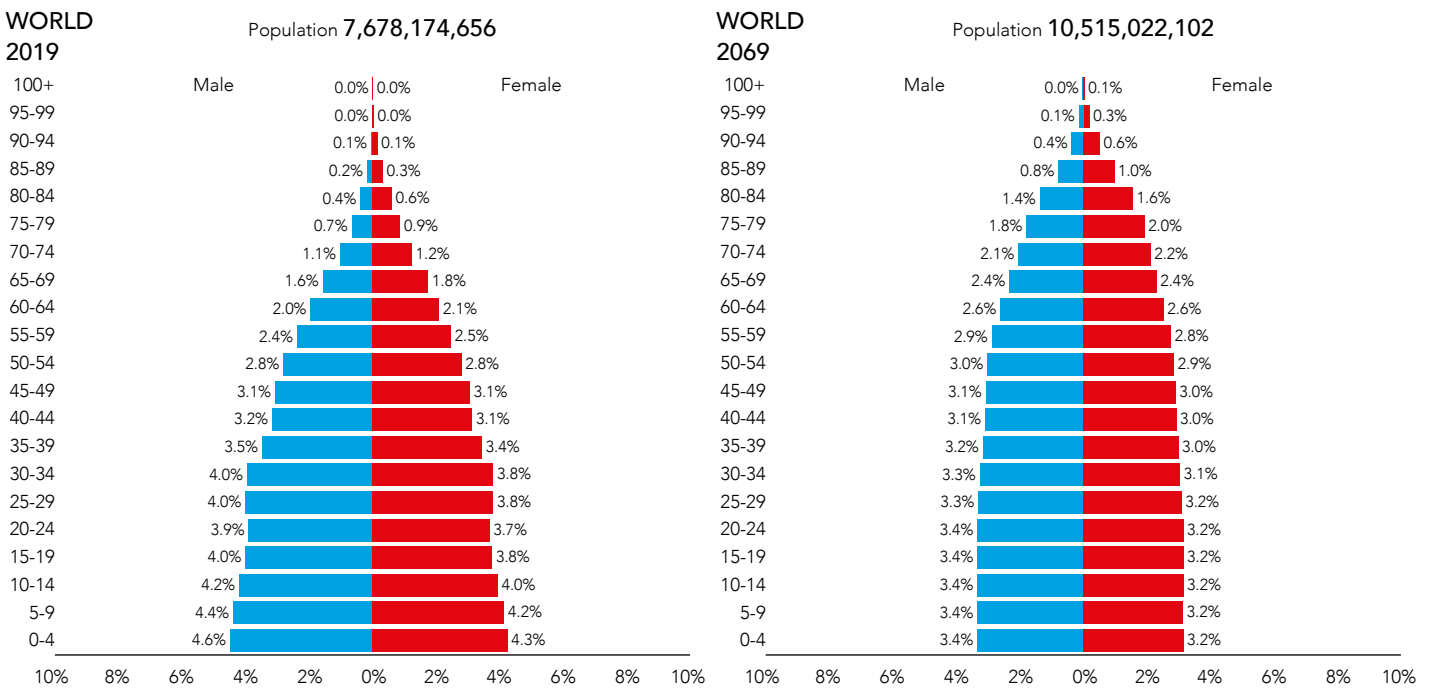
we may expect careers to endure much longer and individuals in their 70s and 80s may remain gainfully employed. This could be driven by economic necessity, as well as a decline globally in the relative proportion of younger people in the workplace and rising old age dependency (Figures 4.4 and 4.5).

‘My CFO is 70 years old. And he’s actually the one who’s driving all of our technological changes’.

Interviewee

The changing composition of the workforce in the profession may also signal different entry and exit points and pathways in and out of jobs in accountancy. We may increasingly see later starters joining the profession, or indeed those in mid-career switching out as they seek to build wider career portfolios and experiences. This should be seen as enriching the diversity of talents entering the profession but it will necessitate employers thinking more laterally about pools of talent and their employee proposition for engagement.

FIGURE 4.5: Changing population demographics



Source: PopulationPyramid.net 2019

'I think organisations have become a lot flatter. Your traditional pyramid model just doesn't work'.

Interviewee

4.8 BEYOND THE LATTICE?

From career ladder to career lattice (ACCA 2018a). But even the term 'career lattice' implies vertical advancement up the organisational hierarchy. As organisational structures become more fluid and traditional hierarchies are reimagined, as the organisation's skills needs become diffuse and must adapt more rapidly in response to fast-changing environments, career pathways will be less anchored on the traditional vertical model and pyramid-shaped organisation, and new jobs will be created (Figure 4.6). ACCA members expect to see accountants move into increasingly diverse career paths (Figure 4.7).

Changing business needs will demand continuously augmented skills, as new service offerings or work activities evolve

and technology and digital developments transform business models. A rethink is required, particularly with a younger generation entering the workplace who may be less interested in following a linear path to 'vice president' (VP). Transitions between different organisations are likely to become more commonplace. Career paths will become less visible and less obvious.

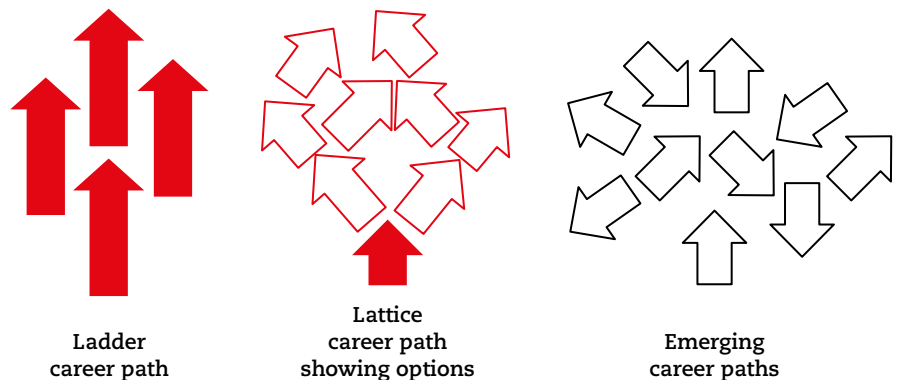
'the upward progression is not as it was 10 or 15 years ago... organisations are getting flatter'.

Roundtable participant

'we have just had a conversation this morning about alternatives to the traditional partner track that are appealing and rewarding to our purpose'.

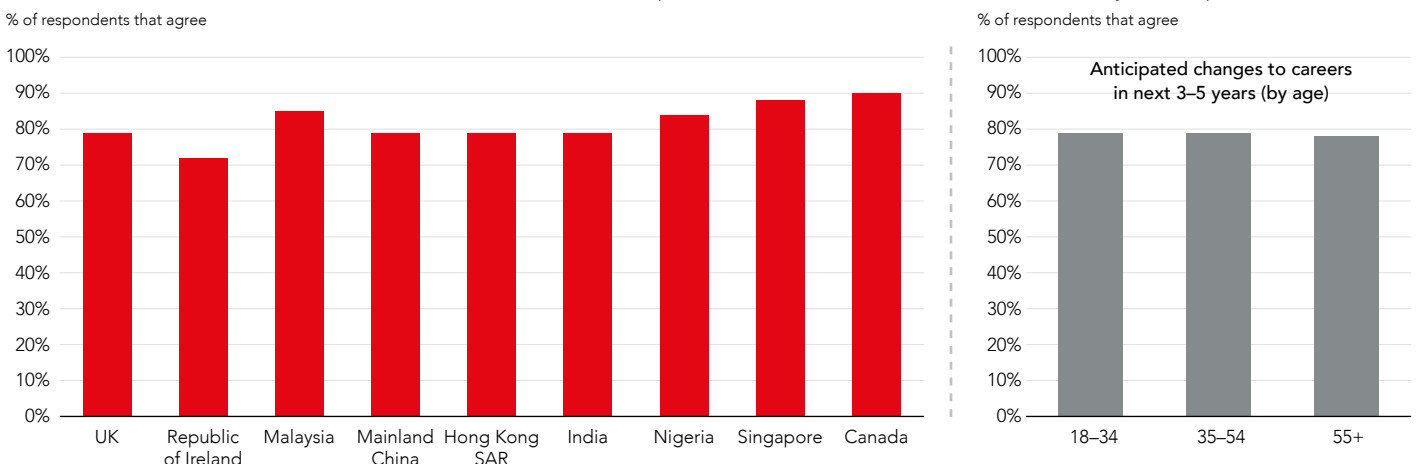
Interviewee

FIGURE 4.6: Career-path evolution



Source: ACCA 2018b (the original graphic includes 'ladder career path' and 'lattice career path showing options' only)

FIGURE 4.7: Accountants will move into more diverse career paths / switch out of traditional accountancy career paths



New approaches to 'off-balance sheet' talent and a more distributed workforce are changing talent paradigms and creating new opportunities in organisations and in the wider ecosystem.

□ *'Back in the day we had a clear career path to become an accountant, you become accounting manager, you probably become a VP or CFO, but with these new roles coming in, there's a lot of fluid expectation, but there is no pathway, there's no roadmap. So people are getting into these new roles are excited, but at the same time, [we should ask] what's going to happen? What's going to happen in the next two to three years? Because they have to keep themselves up every year with new technology'.*

Interviewee

□ *'More variable career structures mean that individuals must demonstrate their abilities as they seek new and more challenging opportunities'.*

ACCA 2018b

4.9 RENT A CFO?

The rise of the gig economy and the 'hire, train, or borrow' debate (ACCA 2018a). In the profession we should expect to see an increasing proportion of different and diverse categories of labour, from traditional employees to contingent, freelance, 'gig' and crowd workers, as well as those who work entirely virtually. New approaches to 'off-balance sheet' talent and a more distributed workforce are changing talent options and creating new opportunities in organisations and in the wider ecosystem.

We may possibly see wider use of contingent or contract work in the profession as we look forward, and even emerging employment practices such as crowdsourcing increasingly feature as careers evolve and work and employment practices shift (Oliver 2018). It may be

cheaper for organisations to shift to contract hire, and there may be tax benefits from doing so, or it may simply be a matter of employee lifestyle choices and a reluctance to work 9–5. Fast-emerging regulation also sometimes necessitates bringing in specialised accountancy staff with niche expertise. The shift may also be driven by new emerging technologies and hiring platforms designed to speed up talent recruitment. But it may also be driven by economic necessity. As teams become more dispersed, organisations need to think carefully about how workplace culture, engagement and connectivity work successfully in a restructured workforce.

□ *'I think in consultancy, the trend will be to actually have a database where you can choose the people and the skills that you require at the time when you require them, not to have them employed for an undetermined period of time'.*

Interviewee

As the workforce is augmented by robots and cognitive agents, finance will need humans who can build and connect systems that interact with other systems. Some will be traditional employees, and others may be contractors or freelancers. In either case, there will be a premium on talent that understands technology and business. These professionals are already in short supply. The shift to a hybrid workforce, including new combinations of on and off balance sheet workers will grow. ■

Source: Deloitte 2018a

‘Many of the traditional perceptions of work are being increasingly challenged by evolving business models. This highlights the impact of changing business structures on organisations as traditional ones give way to more flexible and dynamic team-based structures’.
(ACCA 2018a)

4.10 FROM COMMAND TO COLLABORATION

Organisations themselves may be structured less hierarchically in future, shifting away from traditional ‘command and control’ reporting lines. Many organisations today remain wedded to organisational structures that were formed from 19th-century industrial revolution thinking, and ‘rooted in an efficiency paradigm that seeks to service predictable customer habits and known competitors’ (Deloitte 2016a). But an agile, hyper-competitive, disruptive business environment demands more agility than these structures can sometimes necessarily provide. Afforded by changing communication possibilities and increased connectivity platforms, team working could transform as we look forward across the profession. Professional accountants may get increasing opportunities to join project teams that come together and then potentially disperse after the problem has been solved or the business outcome achieved. Virtual working will enable decentralisation of these teams, which can operate across different geographies easily. Competitor and partner boundaries will become increasingly blurred too. Individuals will be sought out to work in different teams and be rewarded for their skills and not because of their job title.

Finance organisations will be flatter and more distributed, with agile teams taking advantage of instant and easy to access data

Members of cross-functional teams will grow by learning from each other. New leadership and teaming models focused on intense levels of collaboration will grow. They’ll tackle problems and challenges too complex to be addressed by any individual or group with the same skill set. The finance workplace will need to enable and facilitate collaboration across a broad range of interdisciplinary teams. ■

Source: Deloitte 2018a

4.11 CURRICULUM VITAE R.I.P?

The career model in the profession has typically followed a tried and trusted path. The orthodox approach is of an early technical foundation, a linear CV presented around ‘accumulated’ job titles; often narrow areas of specialised experience with few employers. Emerging work constructs may fundamentally challenge how individuals record their career history. Individuals may need to ‘sell their story’ differently to respond and adapt in a more fluid work environment across the profession as roles transform and new opportunities rise and fall quickly. Alistair Cox (2019), the CEO of global recruitment firm Hays, recently suggested that ‘as the world in which we work changes beyond recognition, so does the C.V.’.

As organisations transform, and as new business models emerge, individuals may need to think more laterally about the different skills groups they are building to navigate changing employer work practices, and shifting career opportunities in the face of disrupted employer career models. They should look at their career journeys not just as a series of job roles, but the richer narrative of how those experiences have built a set of skills and competencies that are of value to organisations. The CV of the future is skills-centric not job-title-centric.

□ *‘It’s being able to match what they have done (on their CV) to what competency does that highlight’.*
Roundtable participant

□ *‘I just recently saw a CV from a millennial that we were talking to... What was very interesting is how they approached their CV. It was just not linear reading, it was a very, very different read’.*
Interviewee

In tomorrow's profession, the capacity to unlearn and relearn will shape and colour how careers in the profession evolve, and how professionals reinvent and reimagine their own working lives.

4.12 SKILLS TRANSFORMATION

In the face of rapid transformation, companies that innovate fast and that can act with significant agility are better placed to compete. This is crucially dependent on fostering a talent strategy that can adapt in the face of changing business circumstances and needs, and that promotes the right emerging skills and capabilities. ACCA's Professional Quotients identify the mix of capabilities that will be needed across the profession as careers transform and roles change (ACCA 2016a). Technical skills and ethics remain core across all the future roles that professional accountants will perform and represent the foundation for success, whatever the career journey that is taken. But the changing workplace for professional accountants demands other new capabilities too.

'As they start their careers they have both professional and technical skills of a certain level. As their job roles progress they may, initially, need to develop deeper technical skills which in time are balanced by further professional skills. At a more senior level in the organisation they place greater reliance on the technical skills of others so the professional skills acquire increased emphasis'. ■

Source: ACCA 2018b

4.13 CONTINUOUS LEARNING

Keeping 'up to date' has always been a *sine qua non* for professional accountants, the cornerstone of remaining capable and competent. It's the quality assurance kite mark that has underpinned trust in the profession since its inception. But this fast-moving environment demands a rethink in our approach to learning new skills, more often, in the race to remain relevant. In tomorrow's profession, the capacity to unlearn and relearn will shape and colour how careers in the profession evolve, and how professionals reinvent and reimagine their own working lives.

"The one thing I really do not regret in my career is becoming an ACCA member. I think commitment to things such as ethics, setting standards, ensuring that our people get the opportunities for continuous improvement, continuous education and CPD are important".

Roundtable participant

This shift creates a particularly challenging transition from the traditional structured tertiary education model to a workplace that demands flexibility in our approach to acquiring new capabilities quickly. It requires a continuous learning mindset.

This also challenges traditional compliance-orientated approaches to CPD based on 'time served'. Instead it prizes clear outcome-based approaches where learning remains relevant and applied. Learning from others, coaching or reverse-mentoring interventions, a growing appetite for apprenticeships (blended learning and employment) in some countries and interventions that 'collapse the distance between the classroom and the workplace' (ACCA and Said Business School 2019) become more relevant in this emerging world of work.

'It has to be about curating not creating learning, because you can't keep up with all these different needs. What we found was that employees were actually going out and buying privately all these other courses'.

Interviewee

4.14 LEARNING CULTURE

With the half-life of skills declining rapidly (Bersin 2017), and information sources exponentially increasing, the changing speed and source of learning opportunities fast tracks. While changing individual mindsets to be more open to learning is one thing, transitioning to a continuous self-directed learning culture right across an entire organisation is quite another, and some research suggest this is at best work in progress (Towards Maturity 2018). Increasing employee 'self-curation' will further refine the future role of learning and development teams as content curators rather than content providers. Businesses will need to remodel and anchor the enterprise learning ecosystem much more closely to continuous achievement of individual and wider business outcomes and performance. This knits the growth of individuals and teams to organisational growth much more clearly, with a focus on 'teaching people to learn rather than teaching them what they need to do their job' (ACCA 2018a). It necessitates fluidity and innovation in building learning cultures that support employees to be able to search and evaluate sources of 'trusted' learning.

'Learning is never ending, and there's an expectation that all of our professionals, no matter the level, continue to upskill. We have learning expectations for everyone'.

Interviewee

'Performance management. I think that's been a significant change from a once a year kind of assessment, to building almost ... a sort of ongoing coaching intervention. And then the motivation to actually become better coaches, to become better people leaders was huge, because suddenly there was no system for people to hide behind. We are getting lots of different people with different skills, different capabilities, different levels, different things that make them perform. And that requires more competent management: it is coaching, leadership and it's management'.

Interviewee

4.15 DIGITAL LEARNING

It isn't just mindsets and learning cultures that need to change. Emerging technology is opening up new blended learning opportunities and different options for both informal and formal learning in the workplace. This facilitates the rise of self-curated learning as well as the need to expedite learning outcomes or deliver 'just in time' learning interventions.

Optionality is being introduced to support better learning in the profession, and digitisation is creating new opportunities to consume content. Mobile learning affords organisations potentially limitless opportunities to enhance the learning offering on an 'anytime anywhere' basis across different technology devices and platforms.

Witness the growth of offerings from platforms such as Adobe, LinkedIn, Skillshare, Docebo, and EdX and it is obvious that choice is expanding, delivering commoditised learning opportunities that support continuous skills development. The rise of new simulation approaches, 'gamification', the explosion of social learning and peer-to-peer learning, as well as new emerging possibilities through Augmented Reality and Virtual Reality all potentially drive significant learning benefits and return on investment benefits.

'As far as the delivery of our learning curriculum is concerned we have several different ways, but one of the key new areas is through more digital channels. So [we have] more of a curated on-demand learning experience that is more of a pull than a push'.

Interviewee

Diversity in the workplace is key to creating high-performing teams who can innovate, connect with customers and drive business outcomes.

4.16 INCLUSIVITY

A diverse workforce makes good business sense. This is a strategic business issue and not just a moral obligation. In a global marketplace, inclusivity practices that help drive diversity are key to organisations' ability to innovate and be fast to respond. McKinsey's seminal *Why Diversity Matters* publication (Hunt et al. 2015) identified a correlation between greater levels of diversity in a firm's leadership and the likelihood of performing better on profitability than similar organisations in an industry peer group. Its follow-up 2017 report identified that 'companies in the top-quartile for gender diversity on their executive teams were 21% more likely to have above-average profitability than companies in the fourth quartile. For ethnic/cultural diversity, top-quartile companies were 33% more likely to outperform on profitability' (Hunt et al. 2015). Research by Boston Consulting Group has also found that 'companies with above average diversity on their leadership teams report a greater payoff from innovation and higher EBIT [earnings before interest and taxes] margins' (Lorenzo et al. 2018). The Deloitte 2018 millennial survey cites that 74% of individuals believe their organisation is more innovative when it has a culture of inclusion (Eswaran 2019).

'part of what we are trying to do is particularly when we look at more diverse workforces is just making sure that our people know that there are many opportunities for growth'.

Interviewee

For the accountancy profession, diversity manifests in different ways, from widening social mobility access to diversity of skills and experiences, to greater diversity in gender, age, perspectives and experiences, and international mobility afforded by rising career opportunities across different markets. Previous ACCA research has identified a need for the profession to be further opened up as a career choice for those from lower socio-economic backgrounds and the need for institutional biases to be removed (ACCA 2018b). But diversity extends beyond this too, to the diversity of thinking that is needed by employers in the profession. Diversity in the workplace is key to creating high-performing teams who can innovate, connect with customers and drive business outcomes.

New business models have an increasingly important role to play as organisations with purpose, contributing to local economies, building infrastructure, and unlocking social potential.

4.17 BUSINESS MODEL INNOVATION

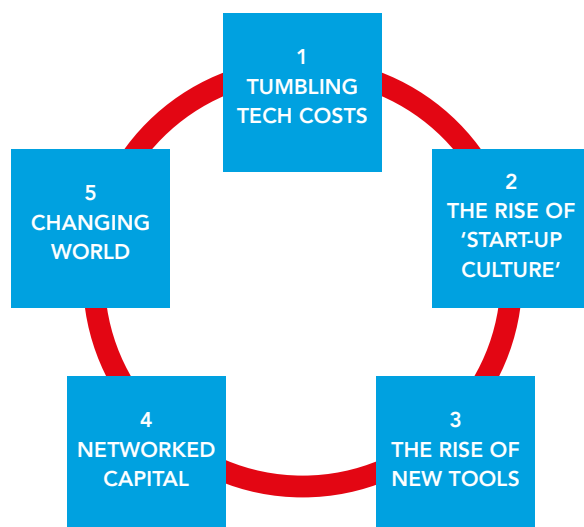
We live in an era of rapid business model evolution, and new organisational designs are entirely rethinking how long-term value is created and sustained. Different types of business model and platform working are rapidly forming across the global economy (ACCA 2017a), spurred on by fast-changing technology, rising market purchasing power, enhanced networked connectivity and better opportunities to secure funding (Figure 4.8). New business models have an increasingly important role to play as organisations with purpose, contributing to local economies, building infrastructure, and unlocking social potential. ACCA research has previously reported different characteristics that are being combined in various ways to create businesses with purpose that tap into new sources of inclusive value (ACCA 2018c), and that are resilient enough to adapt in a fast-changing and complex global environment. With the advent of cloud and more connected digital technologies, sectors and industries within the global economy that had previously operated in isolation are now more able to connect and partner to generate business growth, fuelled also by a greater capacity to access talent in a connected, global 'gig' economy. There is a blurring of

competitors and partners as digital technology affords access to markets and organisations cooperate to solve problems. More and more professional accountants in the future can expect their careers to unfold in new and very different types of emerging business models. For those professional accountants with entrepreneurial ambitions, this presents a significant opportunity.

4.18 TRUST AND ETHICS

Trust, ethics and professional competence are for ever the cornerstone of the global profession. These remain as important as ever in a world where public interest in the performance of organisations and how this is achieved continues to rise; good behaviour is rewarded and bad behaviour destroys value. ACCA research points to the rising importance of strong ethical behaviour from professional accountants as businesses transform in the digital age (ACCA 2017c). But this isn't just a narrative about behaviour. It is also a narrative about competence in a world which is complex and where sources of knowledge and information continue to grow exponentially, and where the source of 'truth' is harder to pin down. More than ever, professional accountants need to be 'trusted'.

FIGURE 4.8: Drivers of change for new business models



Source: ACCA 2017a

85%

of the younger generation of accountants surveyed want careers that span international locations

4.19 MULTI-POLAR WORLD

More of us now live in cities than ever before. This is a long-term global trend that is expected to shape the way our societies will operate as we look forward and the future of work. More than half of the current world's population lives in urban areas, and this is expected to grow to 68% by 2050 (United Nations 2018), with a possible 2.5bn people added to urban areas over the same time period, with India, China and Nigeria accounting for 35% of this growth. Currently, Asia is home to 54% of the world's urban population with Europe and Africa contributing 13% each. Many opportunities across the profession will be linked to urbanisation, city growth and the future of mega-cities. We will continue to see aspirations for international mobility and careers that span different countries and regions of the world as career opportunities are increasingly democratised and made visible through technology. According to ACCA (2016b) research, 85% of the younger generation of accountants surveyed want careers that span international locations.

□ *'A lot of the younger professionals want opportunities that allow them to rotate to different organisations or geographies'.*

Interviewee

Yet predicting precisely where in the world we will see changes in career opportunities across the profession remains a difficult and nuanced task.

Economic growth within particular countries is influenced by a myriad different factors. Changing demographics, rising or falling income levels and consumption, technology deployments, investment in public infrastructure, and social and environmental policies all influence economic success. According to the Bureau of Labor Statistics at the US Department of Labor, over the period 2018–28, the employment of accountants and auditors is expected to grow 6% in the US. McKinsey research suggests that the occupational categories with the highest percentage job growth net of automation include accountants, but also suggests that the profession may be susceptible to declining employment in advanced economies owing to automation (McKinsey Global Institute 2017). It is a complex global picture.

There is one region of the world that is on a longer-term trajectory of rising economic growth – Asia. According to McKinsey research, in 2019 Asia accounted for just under one-third of global GDP (in purchasing power parity), but is 'on track to top 50 percent by 2040' at which point it is expected to account for 40% of the world's total consumption (McKinsey Global Institute 2019). Over the last decade we have seen the continual shift of resources away from Western economies to Asia, and this region, particularly, is a catalyst for highly innovative, fast-growing global organisations. This should create new opportunities for professional accountants across many different sectors.

'When we think about the industries which professional services support, the scale and pace of change is really quite staggering. To take the example of the built environment, more than 1.5 million people are being added to global urban populations each week, and \$8 trillion (USD) will need to be spent on infrastructure in New York, Beijing, Shanghai and London alone in the next 10 years. Also, there will be a regional rebalancing, because a staggering 90% of this urban population growth will take place in Asian and African countries. It's therefore not surprising that we are seeing professional services businesses also changing rapidly, thinking about where and how they operate, and the skill-sets which they will need in their teams to support clients operating in this challenging environment'. ■

Ian Jeal, Director of Education and Qualification Standards at the Royal Institution of Chartered Surveyors

Source: ACCA and Said Business School 2019

Technology has the potential for revolutionising employer recruitment processes that go beyond scanning resumes for keywords.

4.20 DIGITAL RECRUITMENT

Technology is also transforming the recruitment process for employers and the job-sourcing process for candidates. It started with using applicant-tracking software to drive efficiencies in candidate selection and has led to growing numbers of start-ups developing software to reduce transactional and time-consuming recruitment tasks such as initial screening. Technology has the potential for revolutionising employer recruitment processes that go beyond scanning résumés for keywords. It is driving more effective potential employee targeting and algorithmic matching and giving access to new channels of engagement. Consider the growth in emerging start-ups and digital talent marketplaces that are helping organisations access non-traditional sources of talent and widening the potential pool of candidates.

Automation tools are also driving administration efficiencies, helping diarise interviews and providing regular updates on candidates in the process. A new class of emerging AI-driven tools are also driving deeper insights on candidate profiles. All this leads to falling costs and increasing candidate quality, in theory at least, although emerging concerns that algorithmic bias is being introduced mean that this needs to be monitored closely. These developments have potentially profound implications for how candidates source and connect to new career opportunities in the profession. Witness the growth of LinkedIn over the last decade. We may also transition further in the profession to a world where individuals are increasingly recommended, rated, scored and matched by algorithms. It seems the future of recruitment and job search is definitely digital (Figure 4.9).

FIGURE 4.9: Talent acquisition technology ecosystem



Source: Talent Tech Labs 2018



5. Future career opportunities

5.1 THE ASSURANCE ADVOCATE

The assurance advocate brings new levels of trust and integrity to organisational operations. They may focus on enterprise risk, helping drive transparency and understanding of emerging issues affecting business performance, or be at the forefront of shaping future forward-looking audit practices as the capabilities of digital tools and technologies expand. They could be driving best practices in emerging control frameworks or helping organisations meet ever-growing regulatory demands or managing complex tax issues. They may even be auditing algorithms in the future. They are essential to the strong stewardship of sustainable organisations for the future.

- Disruptive and challenging environment drives growing assurance needs.
- Stakeholder scrutiny of organisation performance remains high but trust in organisations remains challenged.
- Risks grow in complexity and are ever more interconnected as business models transform.
- Increased demand arises for audit to add more value and be much more forward looking.
- Data drives huge potential for integrated assurance activities that provide greater confidence.
- Digital technologies revolutionise traditional assurance activities and provide new value opportunities.
- Greater connectivity reshapes how and where assurance activities are delivered.

Delivering sustainable growth or meeting changing consumer or public demands is challenging in a hyper-disruptive environment. There are more stakeholders and more vested interests in organisation 'performance', the nature of organisational outcomes and how they are achieved. This is a call to arms for greater assurance about how businesses operate. It is a question of trust.

Assurance in its many different forms has always been at the very heart of the profession, evolving from corporate governance and risk practices to building confidence in financial markets through auditing best practices and standards development. Stakeholders expect professional accountants, as assurance experts, to demonstrate expertise, take responsibility, act with integrity and exercise professional judgement. Greater environmental complexity will always create an expectation gap (ACCA 2019d) between auditors and the public, which regulators and policy setters are increasingly codifying in the realms of external auditing, but the principles equally apply to all professional accountants operating across the wider internal and external audit and risk assurance space. With a deficit of trust, it is difficult for organisations to build sustainable value

The exponential growth of enterprise data means a wealth of new information sources relating to emerging risks, control data points, and compliance information.

or attract inward investment, and it is difficult for capital markets to function efficiently. ACCA members expect to see opportunities grow in compliance, enterprise risk management, tax, internal audit and external audit (Figure 5.1).

There are a number of factors shaping how career opportunities in assurance will evolve and these will colour what future roles may look like. We start with the explosion of data. The exponential growth of enterprise data means a wealth of new information sources relating to emerging risks, control data points, and compliance information. Coupled with automation, cognitive technologies, and new analytics tools and techniques to enhance data mining, traditional risk and auditing techniques will significantly augment reporting and will be able to give much greater reporting confidence, reducing errors and increasing efficiency.

We can expect to see cognitive technologies and the use of algorithms to drive better visualisation and risk insights. The burgeoning internet of things and smart devices gives organisations new integrated tools for enhancing control environments, from increasing cybersecurity protection to more automated compliance activities and improved measures for detecting fraud. The application of robotics technologies, coupled with improved standardisation of processes will also help drive better data accuracy and process visibility using in-built data validation capabilities, but it will also free more time for assurance areas where there is a need for more professional judgement to be exercised. Better data enables risk, audit and assurance professionals to deploy greater scepticism, lateral and creative thinking and to ask better questions or gain a clearer understanding of the interrelationships across the assurance chain.

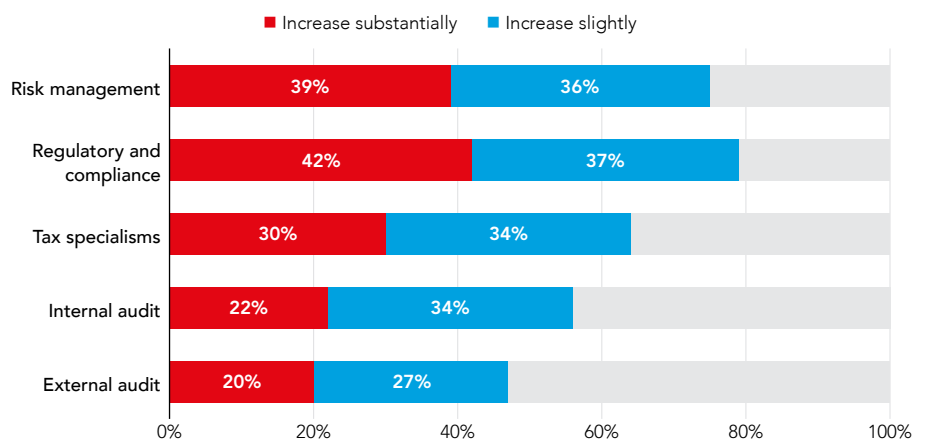
‘The use of advanced technologies such as AI and ML, blockchain and data analytics promises a transformation in the audit profession, changing audit from a reactive and backward-looking exercise to a proactive, constant source of forward-looking insights that can be used all the time, with the auditor as the custodian and interpreter of the underlying data foundation’.

Source: ACCA 2019d

‘I think there are so many technologies and clients are also moving into automation and machine learning, we are looking at something called trust services, where we are actually going to check all of this for the client, to say that your systems or your bots are designed for the purpose for which you have set [them] up and say yes, your bots are operating as designed’.

Interviewee

FIGURE 5.1: Expected change in opportunities



Source: ACCA Future of Careers member survey 2019

% of respondents that agree

One of the most significant areas of opportunity with assurance is for developing a more holistic view right across enterprises and the business ecosystem as to the effectiveness of all the different assurance activities that take place.

Across the assurance space, the growing capability of smart machines will allow assurance advocates to work with much greater sizes of data sets and perform deeper analysis using machine learning and deep learning techniques, and they will do so more quickly and more comprehensively than a human could (ACCA and CAANZ 2019b). Consider the use of AI and cognitive tools for reviewing and analysing different types of risk and assurance-related documents, for example, or extracting key information and data fields, driving greater efficiency in, for example, contract reviews. Another example where new technologies could simply make the auditing process more efficient is the use of drones on stock takes (ACCA 2019b), or other mobile devices that support inventory counts that are immediately shareable across audit teams. And there are other uses of emerging technology too, for example, in compliance with global KYC (know your client) regulations. The use of AI and forensic data analytics to enhance the risk-assessment process in regulated entities has significant implications for the effectiveness of AML and sanctions controls. In addition, the application of RPA can yield the twin benefits of the streamlining of operations with enhanced consistency, and relieving compliance and auditing professionals from repetitive administrative tasks, enabling them to focus on high-risk areas. But even with technological developments there will still be a role for the skilled and sceptical auditor, particularly in relation to more predictive insights in the future. 'We should put as much effort into how we train people to use predictions as we do into the predictions', was the conclusion of a Harvard researcher investigating claims of bias in AI-assisted bail decision scoring (Simonite 2019). It's the skills gap as well as the technology gap that will need to be addressed.

One of the most significant areas of opportunity with assurance is for developing a more holistic view right across enterprises and the business ecosystem as to the effectiveness of all the different assurance activities that take place. As different organisational risks emerge, or as new regulatory or compliance initiatives are needed, too often risk, compliance and assurance responses have been isolated, disjointed and inefficient, and the understanding of activities that drive organisational value and assurance around these has not been visible. This status quo becomes less tenable in a marketplace which is agile and fast moving, which rewards better-informed decision making and a more comprehensive understanding of the risks aligned to strategy delivery. Future approaches to assurance that are collaborative and more explicitly linked to the achievement of business objectives, that understand the value drivers at the core of the organisation and therefore focus on these, are essential components of driving future sustainable business success. A good example here of the power of a more holistic joined-up view is fraud. A survey of senior executives within financial institutions found that 71% of respondents recognised a compelling case for integrating some or all of their anti-fraud and anti money laundering (AML) systems into a single environment. Driving the maximum benefit from these approaches will demand a comprehensive overview of all the business data sources, and a holistic programme of integration based on an understanding of the business's needs as well as its ability to adapt (Chartis and EY 2015).

Another key area of development is continuous assurance assessment. In an increasingly dynamic, connected, agile environment, there are naturally obvious limitations in traditional external audit,

In a fast-changing and competitive marketplace, organisations want to ensure that their risks are being appropriately and ethically managed, particularly as the nature of risks facing organisations in all sectors is changing.

risk management and internal audit planning cycles and rotational delivery. Technology can play an emerging role in monitoring risks and controls in real time and reporting on these, for example, consider the application of RPA technologies across internal processes to drive system monitoring and control, coupled with better reporting and visualisation capabilities. Examples such as these give the assurance professional greater capacity to meet rising customer expectations in providing real-time assurance insight.

Risk management is an exciting and growing area of opportunity for professional accountants. In a fast-changing and competitive marketplace, organisations want to ensure that their risks are being appropriately and ethically managed, particularly as the nature of risks facing organisations in all sectors is changing.

Consider, for example, the emergence of cyber (ACCA and CAANZ 2019a) or environmental risks as a growing area of focus, or even risks relating to culture and people. There is an active shift within risk management from an activity focusing predominantly on controls, compliance and managing risks that may destroy value to one that is more performance-centric and targeted on supporting risk mitigation to drive value and growth, and aligned to executing organisational strategy (COSO 2017). There is also growing use of visualisation tools and risk dashboards, which enable those at the top of organisations to take more informed risk-based decisions and build better 'risk-intelligent' cultures within the organisation (EY 2018).

'Organisations in the 21st century are facing high levels of complexity and uncertainty. Whether it is from the effects of global warming, developments in cloud computing, social media or political change and the potential for less liberal trading environments, the number of ways in which organisations can trip up only ever seems to increase'. ■

Source: ACCA 2018e

Increasingly, the speed and agility with which strategic risks are understood and communicated through the organisation must be heightened as the nature and types of risk that organisations face continue to become more complex and grow. There are increased calls for risk management to be better aligned to building and communicating the long-term strategy of the organisation, and for it to be enterprise wide, rather than having a siloed approach (AON 2019). Recent research from Deloitte (2019) identifies a number of key areas of opportunity that support these ideas, suggesting 'organisations that invest in risk management, and specifically link risk management to the attainment of the most important strategic and financial goals, typically achieve higher relative growth'. The same report also suggests that risk management is becoming more elevated and more strategic in most organisations and that 'organisations with integrated risk management programs achieve higher growth more often'.

There are growing demands for more proactive and forward-looking approaches to auditing, with digital tools and technologies having enormous potential to transform the risk, broader assurance reporting and internal control landscape to create and preserve value.

‘Technological changes in businesses and their business models require the attention of auditors of any size, including small and medium-sized practices (SMPs). For example, start-up businesses now tend to have business models based on advanced technologies. Complex audit challenges could therefore come from smaller businesses too’. ■

Source: ACCA 2019d

Audit is changing too. There are growing demands for more proactive and forward-looking approaches to auditing, with digital tools and technologies having enormous potential to transform the risk, broader assurance reporting and internal control landscape to create and preserve value.

The increasing use of technology does not, however, mean that the fundamental knowledge underpinning auditing and assurance processes must change.

‘The latest advances in technology promise significant benefits for the audit profession, with a number of key drivers signalling the need for technological change in audit. Such drivers include the rapid increase in volume of data, changes in business models, the shift towards automation and the demand for a proactive and forward-looking approach to audit. These developments require auditors to be technologically sound to enable them to continue servicing businesses and to execute high quality audits’. ■

Source: ACCA and CAANZ 2019b

Consider the external audit process for example – here there are a number of fundamental principles which will continue to underpin the delivery of audit across the end-to-end process: for example, planning for the audit and understanding the relevant regulatory, legal and ethical considerations, or understanding the contextual risk framework, identifying internal control frameworks and developing appropriate testing of the environment, as well as the principles of audit evidence and reporting. It is simply that technology augments these processes further and should drive both efficiency as well as quality improvements.

In this new world the fundamentals of strong internal audit and governance skills will also still apply. Organisations of all sizes in all sectors will still need professional accountants to ensure governance structures are robust, assessing the internal control framework to provide confidence that it is effective, and to continuously identify control and governance improvements to manage risks appropriately. The professional accountant will continue to advise and develop appropriate risk policies, and develop frameworks to report appropriately on risks as the nature of these change. And they will continue to work across internal governance structures such as boards, audit committees and internal audit functions, and the wider three lines of defence, to communicate risk issues, better understand risk appetite, and apply emerging risk management techniques. Enhancing a culture of responsible risk management in the organisation will also remain critically important.

The auditor could begin to explore tests for examining the underlying credibility of the data and the assumptions on which the algorithms have been developed. This raises new ethical considerations too.

Technology will bring other benefits too. Growing digital capability through the application of emerging technologies will help assurance professionals acquire, interrogate and understand data in less structured formats too (ACCA 2019b), or through non-traditional channels of information such as social media, or build more external data into the analysis. This should enable the professional accountant to acquire a much more holistic view of risks, or a clearer line of sight on audit data information, financial reporting controls, and audit evidence. New external data sources, for example, on markets, on key competitors and on customer trends, will give a much greater contextual understanding of the risks facing organisations, as well as helping them to acquire comparative benchmarked data from similar external organisations to identify any significant differences.

‘In the era of Big Data, the structured information accessible to auditors is only a fragment or an abstraction of the much wider universe of data. But this “dark matter” exists in unstructured formats: the ability of Deep Learning [technologies] to analyse a range of internal and external sources means that Big Data can potentially supply complementary audit evidence and feed into the narrative requirements of audit’. ■

Source: ACCA 2019d

One of the still very nascent but very exciting areas for assurance in the future is the potential auditing of algorithms. There may be implicit assumptions that datasets always yield reliable and objective truths (Guszcza et al. 2018), but there is growing recognition that algorithms too may be encoded with societal biases and misinformation. With more and more organisational information produced through algorithms it seems rational to suggest a growing

assurance need in this area. Here the auditor could begin to explore tests for examining the underlying credibility of the data and the assumptions on which the algorithms have been developed. Potentially this raises new ethical considerations too.

All these developments are essential as the role of assurance in the profession expands. This affects everything from understanding how risks are transforming non-financial key performance indicators, to comprehending how emerging and expanding regulatory and compliance demands can best be managed. Particularly as digital transformation initiatives take hold, and growing risks from areas such as cyberattacks, we will continue to see a constantly evolving regulatory landscape. There is more pressure on leadership and senior executives to identify regulatory changes and adapt to them; the costs of non-compliance now are potentially very damaging, financially and otherwise. Digital, in particular, has the potential to transform company approaches to compliance and identification of regulatory or other risks through the use of automation, machine learning and data visualisation techniques to identify fraud patterns and relationships; with emerging governance, risk and compliance tools there is greater capacity to collaborate across the three lines of defence to produce a consolidated view of risks and assurance in the organisation.

Tax is another area where technology can help professionals respond to increasing compliance demands from regulatory authorities. The challenges posed to policymakers by the digitalisation of the wider economy may have blurred the outlook for policy design, but we can at least be confident that automation and AI technologies offer the scope for rapidly classifying large volumes of data for tax purposes, freeing up expert time for more valuable activities. For the specialised few who can navigate the complexities of both tax legislation

‘Tax is, and will remain for the foreseeable future, a high priority of policymakers, businesses and professional advisers around the world’.
(ACCA 2019c)

and AI design, there will be scope to design tools that can predict optimal investment and production strategies to meet defined targets such as effective tax rates, or predict the implications of emerging tax regulations and proactively make suggestions and prompt tax compliance specialists for responses (Milner and Berg n.d.). In this sense, core tax competencies will still be very much needed, from core foundational knowledge of different tax operations and systems through to compliance issues, as well as advising strategically different tax implications for changing business structures.

The application of smart technologies isn't just providing new opportunities to analyse data better and meet evermore demanding assurance needs. It is fundamentally changing the composition of teams and how they are structured, and how work is delivered, driving more effective communication, collaboration and connectivity both across teams and, where necessary, with clients. In the auditing field, for example, emerging and shared technology platforms are enabling teams to coordinate, plan, monitor and deliver approaches to audit and share information virtually across wide-ranging audit assignments. This means audit risks and findings can be managed more effectively and shared across teams in real time. It means a much more efficient and effective approach to audit project delivery and smarter deployment of audit teams. As part of the broader workplace trends identified earlier in this report, we may also expect to see different teams emerging in the assurance space and the shift to 'off balance sheet' assurance talent, potentially more outsourcing of assurance activities, rotational programmes and even potentially the use of crowdsourcing.

‘In the new audit framework, you may not see so much sample testing. It will be more online real-time testing of the transactions and it will be more exception-based testing than the sample-based testing’.

Interviewee

All these developments and technology, in particular, will shape the assurance advocate of the future, and determine the skills most prized. The assurance advocate will be deploying creativity and vision to build a better predictive understanding of what may happen in the future. They will need to be increasingly conversant with emerging technologies, and to understand better how to drive innovation, using digital developments to improve assurance quality, as well as skills in analysing, exploring and understanding emerging data sources. As technology replaces part of their traditional roles, they will spend more time building relationships, influencing stakeholders and communicating implications and findings, and they will increasingly need to work more collaboratively across the organisation ecosystem and beyond to acquire and deliver more forward-looking and insightful assurance information.

‘It's us as finance professionals understanding the role of technology within the business...but then we need to be able to apply the fundamental accounting principles, internal control, the auditing of it’.

Roundtable participant

New operating models, access to new markets, the creation of new service and product offerings, and exploration of partnerships and emerging platforms will drive future business success.

5.2 THE BUSINESS TRANSFORMER

The business transformer is the architect of organisational change. They could be driving major business change initiatives or transforming finance operations. They may be leading innovative smaller accountancy firms that transform client businesses. They could be exploring growing careers in external advisory services driven by technological innovation and economic growth. Or they may be leading smaller enterprises as digital platforms open the door to new commercial opportunities. They are critical to creating change, driving the strategies of organisations, and supporting sustainable organisations for the future.

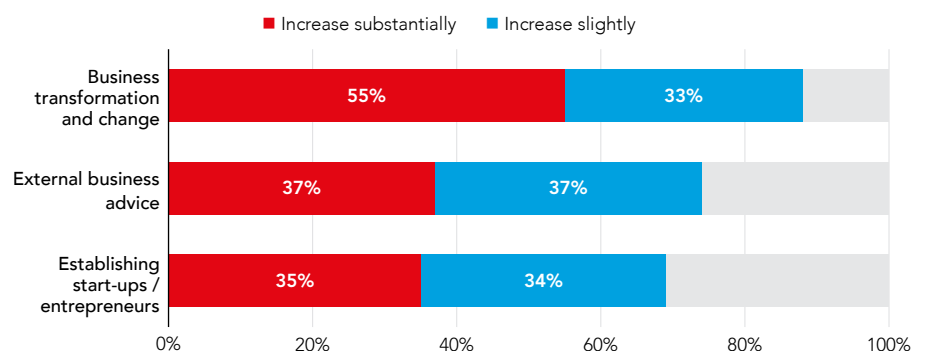
- Digital is the catalyst for business transformation.
- Advisory services continue to go from strength to strength.
- Smaller accountancy firms are entirely reimagined as tech transforms services.
- New business models proliferate providing exponentially growing opportunities.
- Large finance teams are reimagining their organisational design and driving change.
- Continued rise of new operating models drives cross-functional change.

With significant disruption in the external market, business models will continue to disrupt to remain competitive and viable. New operating models, access to new markets, the creation of new service and product offerings, and exploration of partnerships and emerging platforms will drive future business success. From leading start-up businesses to delivering major transformation programmes or finance operational change programmes, the skills that professional accountants acquire to support businesses of all sizes transforming in the digital era will be vital for their roles as advisers and leaders.

This is the professional accountant as the business transformer, driving business change, architecting new emerging operational finance delivery models, re-configuring end-to-end processes and workflows to drive efficiencies, or taking opportunities from new emerging business platforms and channels to market to run smaller enterprises and accountancy practices.

“The real future is in business advisory”.
Interviewee

FIGURE 5.2: Expected change in opportunities



Source: ACCA Future of Careers member survey 2019

% of respondents that agree

‘We, like everyone else, don’t necessarily know yet exactly what roles are going to be in existence, but we do know that advisory skills are going to take on an increasing importance’.

Interviewee

The stand-out opportunities for professional accountants as business transformers include the growth in demand for advisory services, particularly in services such as risk advisory, technology transformation, tax advisory and broader business transformation and advice skills, primarily driven by technological innovation, economic growth and business model change. There are different growth dynamics across the global economy as we look forward that could influence the speed at which these opportunities come to fruition and there are variations across markets in the size of the opportunity. Consider, for example, the remarkable growth predicted in the ASEAN region as the longer-term trajectory and balance of economic power shifts west to east. McKinsey research concludes that Asia is on track to have the top 50% of countries, globally, by GDP by 2040 and will drive 40% of the world’s consumption. Its global institute also examined growth opportunities in 71 developing economies and singled out 18 ‘consistently posting robust economic GDP growth’, citing all seven long-term outperformers and 5 out of 11 recent performers as being located in Asia (McKinsey Global Institute 2019).

Previous research by ACCA and the Singapore Accountancy Commission has also identified growing demand for non-regulated professional services and preference for hiring professional accountants in advisory roles (ACCA and Singapore Accountancy Commission 2018). And there are more global indicators that suggest advisory services are in a relatively healthy state and will remain big business. The proportion of revenues the large accountancy firms earn from consulting and advisory services continues to grow compared with many traditional service lines. Gartner (2018a) has also reported a global consulting market growing by 9.0% to \$188bn. As professional services firms continue to seek to differentiate they will look to transform their business models and evolve new service lines in the face of rapid client transformation. This leverages their capacity to meet increasing client needs globally, deliver better services and drive internal efficiencies. This is an area of significant career opportunity for professional accountants in the future.

‘We can drive change absolutely. And we can transform businesses because we understand so many of the drivers of the business’.

Interviewee

One huge area of opportunity for professional accountants as business transformers is the development of smaller and medium-sized practices that leverage digital capabilities to remodel their business. This is the smaller accountancy firm reimagined as the true business adviser, with a service focusing on business growth and strategic vision (ACCA 2017d). Digital transformation is re-affording professional accountants the opportunity to be the de facto trusted small business advisers, changing the nature of client relationships from traditional accounting advice to broader advisory. And it’s primarily a technology play, as digital adoption automates routine practice tasks, enables quicker and more effective client data analysis to drive value and insight, enhances the speed at which client issues can be diagnosed and resolved, reduces cost, enables scalability of service offerings, and supports business growth by targeted client segmentation by size or sector or geography (ACCA 2018f). Some of this is directly delivered by the practice, but greater collaboration with third parties in this sector is also creating new client offerings. Technology evangelists in this sector are ramping up client connectivity, offering a much better understanding of key trends and dynamics impacting their clients’ businesses, and drawing on wider information sources with enriched data sets. As client expectations grow further, the accountancy firm of the future presents a brilliant opportunity for professional accountants to make a real difference to small businesses by revolutionising the practice offering. They will need to continue to bring a wide range of skills to lead successful practices in this era: as true business advisers they will need skills in understanding the external competitive environment facing their clients, and they will be expected to make clear recommendations and give advice across a wide range of business issues such as exploring new channels for revenue creation or cost reduction, or

As client expectations further grow, the practice of the future presents a brilliant opportunity for professional accountants to make a real difference to small businesses by revolutionising the practice offering.

helping in the development of future business plans and financing opportunities. There are further opportunities, too, for smaller and medium-sized accountancy practices broadening out client advice as more and more smaller businesses seek to internationalise (Figure 5.3). Many smaller accountancy firms are also increasingly recognising wider social purpose and integrating their service offering further into community engagements and causes.

But there are even more opportunities, too, in smaller organisations beyond accountancy firms for professional accountants as business models change and smaller organisations find new ways of creating revenue. Fast emerging global markets with a growing middle class customer base, the growth of social networks that drive faster connectivity,

‘For SMPs digitalisation doesn’t just save time and money but creates new spaces for accountants to move into: not just as financial or even technology experts but with the time and information to act as true business advisers, while still being highly trusted’. ■

Source: ACCA 2019e

‘For SMPs [small and medium-sized practices] digitalisation doesn’t just save time and money but creates new spaces for accountants to move into: not just as financial or even technology experts but with the time and information to act as true business advisers, while still being highly trusted’. ■

Source: ACCA 2019e

scalable, cheap and agile tech, prized innovation, rising entrepreneurial ambitions, and better access to finance and networked capital are all factors creating growth opportunities. This disruptive and transformative environment will shape and provide new career opportunities for professional accountants with entrepreneurial leadership ambitions. From the continued rise of platform-based business models, to the modern barter, to mega-hyperlocal businesses (ACCA 2017a), there are already clear cut examples of innovative and super-successful businesses transforming the economic landscape. And professional accountants with deep and broad skills in accountancy and finance are well placed to take advantage of these emerging opportunities and lead the next generation of business innovation. This leadership of the business requires the bringing together

FIGURE 5.3: Examples of possible international advisory provision

Market research	Strategy and planning	Business model optimisation
Market analysis and business intelligence	Cashflow management and forecasting	Adoption of cloud and data analytics software solutions
International tax advisory	Export finance and payments	E-commerce and information technology
Regulatory and customs advisory	Foreign exchange and transfer pricing	Adapting legal, finance and tax structures
Policy and legislative support/engaging with government authorities	Assessment of business risks, effective control planning and mitigation strategies	Identifying domestic government funding/support programmes
Establishing foreign branches or subsidiaries	Developing international networks and value chain participation	Recruitment and training / talent management

Source: ACCA 2018f

‘A business that prioritises building a strong network of advisers and professionals can increase the possibility of introductions to prospective customers, suppliers and new talent. SMEs can gain further benefits, such as improved access to business intelligence and technological know-how’.
(ACCA 2018g)

of many capabilities, understanding the external environment in which the business operates, and having the capability to apply commercial understanding in the development of robust strategy plans. It also demands an appreciation of different stakeholder needs in formulating and delivering sustainable business plans for the future with appropriate financing.

□ *‘My career has been very broad, but I’ve engineered it to be that way because I always intended to end up running a business’.*

Interviewee

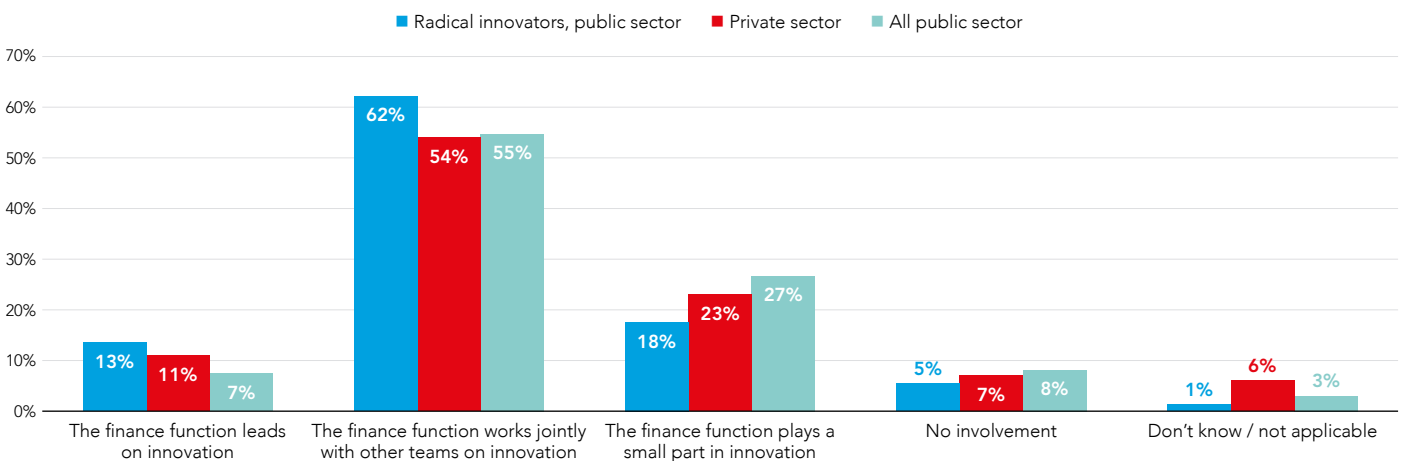
But there are transformation opportunities too for professional accountants as business transformers in much larger organisations (Figure 5.4). In the public sector, the advent of a ‘digital first’ strategy in the UK, for example, driven by changing citizen expectations and interactions with the state, is the catalyst for major organisational change, such as the Making Tax Digital initiative. There are similar digital transformations programmes occurring in governments elsewhere around the world. ACCA’s recent report *Innovation in Public Finance* cites significant involvement of the finance function in public sector innovation (Figure 5.4).

‘High-growth SMEs were more likely than other businesses to seek out external advice to help guide their strategic decision-making. As well as obtaining professional advice this also included obtaining views from a business network whose expertise could support the business’s growth’.

Source: ACCA 2018g

Transformation is big business in an age of mass enterprise disruption, as senior finance professionals in bigger organisations are faced with new imperatives as business transformers evolving their own finance teams (Figure 5.5). It is speed to market and the agility of decision making through better, more insightful data that are key to creating competitive advantage now, and that demands rapid innovation and ‘intrapreneurialism’ across the organisation and gives finance teams a significant opportunity to evolve institutionalised ways of doing things, leveraging people, processes and technology capabilities to step change what and how finance delivers. Never has there been a greater opportunity for professional accountants as business transformers to help shape the strategy of the business and drive innovation in processes. Digitalisation, particularly, is a call to arms for finance function change.

FIGURE 5.4: How involved is the finance function in the innovation taking place in your organisation?



Source: ACCA 2019 member survey; public and private sector innovators; n: 3,665

For professional accountants as business transformers, this race to remain relevant will mean enabling a powerful digitalisation strategy across finance.

The question for business transformers who are evolving larger finance teams is one of balance. They face the need to be a more forward-looking, advisory function while not losing sight of finance’s stewardship and financial controllership responsibilities, which remain fundamental in highly disruptive markets; the need to respond ever more quickly to regulatory pressures and quarterly institutionalised reporting requirements, while also creating space and time to support much longer-term strategic goal delivery; and the need to continue to take cost out of the enterprise while investing in digital capabilities and new corporate investment strategies to drive future productivity and sustainable long-term value.

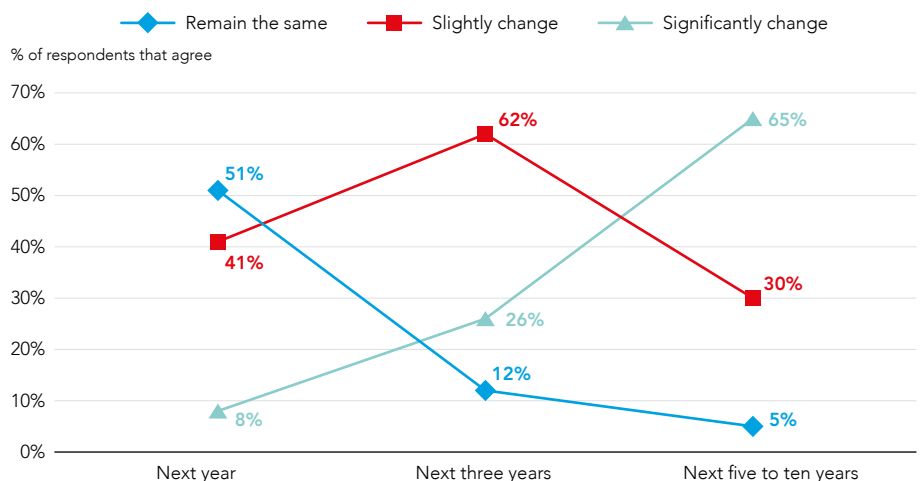
‘Finance is the only function which can see the end-to-end processes, it can look into the whole value chain of the business. So it can connect the business with the market and also with the other functions, via the data and via the financial lens’.

Interviewee

Many of the trends influencing the future of careers that we have identified in this report could shape the thinking of finance

transformers, and the look and feel of larger future finance teams. ACCA and PwC’s recent report begins with a fundamental question: If you could start with a blank piece of paper, how would you design the finance team, and would it resemble in any way the structures we see today? (ACCA and PwC 2019). For professional accountants as business transformers, this race to remain relevant will undoubtedly mean enabling a powerful digitalisation strategy across finance that embraces emerging technology, leveraging automation, and continuing transition to the cloud. It demands an acute recognition of the importance of information and a powerful data strategy that is at the heart of forward-looking insight, performance management and controllership activities. It necessitates a thorough review of the skills that finance currently has, and will need in the future, adopting a culture of continuous learning to future-proof its capabilities as business needs change. It suggests process transformation and standardisation across finance to drive consistency in how it reports across the business and uses data. And above all else it mandates cultural change across finance teams (Figure 5.5).

FIGURE 5.5: How significantly will the role of the finance function change?



Source: ACCA and PwC 2019

‘For finance we all work to support the business model and also to challenge the model every day. We need to ask if this is the right one, will it be the future model to support the business objectives – if it is fit for purpose today and for the future’.

Interviewee

These are all activities and opportunities for the business transformer of the future. There are other opportunities too. For some time, professional accountants as business transformers have been leading the global phenomenon of shared service transformation and the advent of cross-functional global business service (GBS) design. GBS in particular affords professional accountants deep business transformation experience, consolidating operations and locations, and leveraging efficiencies in administration, management, customer relationships and sourcing methodologies. For the professional accountant as a business transformer, a shift to cross-functional GBS opportunities represents yet another step in skills evolution from a functional finance shared service. Here, the emphasis is on programme and project management, virtual management, change management, governance and commercial supplier skills, as well as building specialist sourcing skills across functions. Spanning processes across functions in a GBS environment also requires significant strengths in relationship management and influencing skills beyond the finance team. Even here, however, technology is changing the operating model paradigm. As labour costs increase in traditional ‘offshore’ locations, there is a growing imperative to understand the optimum location and to adopt state-of-the-art technologies with emerging process improvement capabilities.

In summary, cutting right across the business transformer career zone, in whichever particular role they are performing, the professional accountant will be expected to demonstrate a wider range of leadership and management capabilities. All these roles demand an understanding of how business strategy can be developed and evaluated, requiring ethical and principled, flexible

leadership to operate in what continues to be a fast-changing environment, and an appreciation of how risks continue to evolve. The business transformer is truly at the heart of contributing to the organisation’s future strategy. They will need to be very cogniscent of all internal and external factors affecting potential business performance and be skilled at understanding different ‘strategic’ options, seeking to innovate and continuously improve as they transform the organisations with which they work. To support these goals, there will be other prized capabilities too, from effective communication, and increased focus on working collaboratively with colleagues or clients, to understanding the value of internal and external partnerships, as well as a willingness to problem solve and being an advocate of the valuable role technology can play in this respect. It will demand strong stakeholder relationship management and a willingness to understand and engage with the external environment. Business transformers will need to continuously seek to improve business processes, be advocates for organisational redesign with the aim of improving business outcomes, and play a key role in translating strategic ambitions into day-to-day activities and plans.

‘Another thing which is required is end-to-end process knowledge which is indispensable. That is something which the finance professional can bring to the table if they really broaden their horizon from a business understanding perspective. And if they also have reasonably good understanding or knowledge on the technical side. That combination can really be [powerful] in terms of bringing change in the business model’.

Interviewee

The growing adoption of automation technologies such as robotics not only frees up personnel within the finance teams but also embeds better controls, faster processing speed, reduced cost and better quality data.

5.3 THE DATA NAVIGATOR

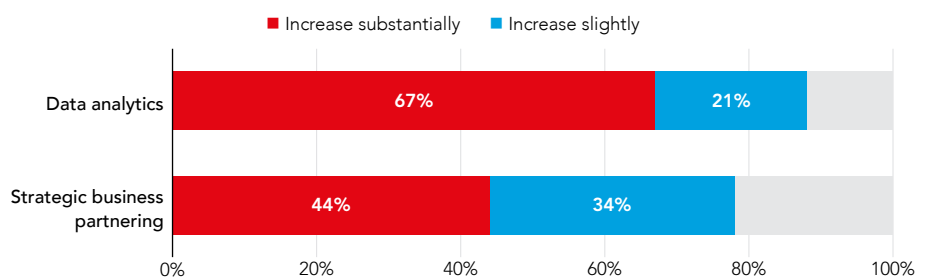
The data navigator is a true business partner. They see extraordinary opportunities from the expansion of data and use emerging tech and analytical tools to drive insights that deliver business outcomes and sound financial management of the organisation. They champion ever-growing multi-rich data sets and use smart data to generate brilliant forward-looking analysis to support decision making. This could be exploring new geographic market opportunities or building the case for investment. They understand that the currency of good information is at the heart of building sustainable future organisations.

- Acquiring smart data becomes a growing imperative.
- Data sources present exponential growth in opportunities for more and better insight.
- Automation frees up data navigators.
- Cognitive tools and analytics technologies present new opportunities to ‘tell the business story’.
- Augmented analytics may revolutionise big data capabilities.
- Finance teams transform into the analytics powerhouse of the organisation.
- Business partners tackle increasingly complex business problems across functions.
- The data navigator swaps number crunching for narration and data retrieval systems for visualisation.

How organisations use data and information is key to creating advantage and long-term success. From better profiling of competitor threats to understanding new channels to market to building the business case for new investments, the enormous rise of data as an enterprise asset provides new opportunities for real-time insight into how organisations create and sustain long-term value (Figure 5.6). This is the professional accountant as a strategic adviser, business partner and analyst, helping develop and leverage multi-rich data sets and fast-changing analytical tools and technologies to obtain more credible insights faster, and achieve business outcomes and goals.

The story of opportunity here again starts with technology (Figure 5.6). The growing adoption of automation technologies such as robotics not only frees up personnel within the finance teams but also embeds better controls, faster processing speed, reduced cost and better quality data. This means obtaining better data faster and having the capacity for finance to focus on data insights that create value in real time. It also creates the space and opportunity for finance to trial different approaches to improve analytics capabilities. Combining the emerging automation technologies with nascent analytics and business intelligence tools and technologies now becomes the critical imperative across small and large organisations alike.

FIGURE 5.6: Expected change in opportunities



Source: ACCA Future of Careers member survey 2019

% of respondents that agree

We can expect to see the use of cognitive tools and technologies, machine learning and AI to upscale and drive efficiencies in data manipulation and insight efficiency.

‘Analytics is one big area. Previously the finance team was more focused on the data which is being generated by the financial system, but today, lots of other data is coming in from the business and outside the organisation, structured and unstructured. That’s a big change’.

Interviewee

Today, there is a mix of analytics tools to which professional accountants have access, with the advent of both cloud-based technologies and prevailing ‘on-premises’ capabilities (ACCA 2019f). The technology opportunity in the analytics space as we look forward is immense. Here we can expect to see the use of cognitive tools and technologies, machine learning and AI to upscale and drive efficiencies in data manipulation and insight efficiency. There are two words particularly capturing the imagination and opportunity here: Augmented Analytics. According to Gartner: ‘Augmented analytics uses machine learning/ artificial intelligence (ML/AI) techniques to automate data preparation, insight discovery and sharing. It also automates data science and model development, management and deployment’ (Gartner 2018b). Augmented analytics has the potential to improve the speed, accuracy and efficacy of the end-to-end business-intelligence process, and represents a step-change beyond the proliferation of self-service business intelligence tools we currently see in the market. Its market value is estimated to grow to \$29,856m in 2025 from \$4,094m in 2017 (Allied Market Research 2019).

‘The person who has to be competent in data visualisation is the person who has to be competent in data integration, who is the person who has to be competent in data analytics because they will be dealing with different departments’.

Roundtable participant

The opportunity for professional accountants as data navigators using great data through augmented analytics is clear (Figure 5.7). Organisations’ data sets are growing exponentially and, with the rise of big data and data lakes, the growth of structured, unstructured, internal, external, financial, and operational data driven by the internet of things and other emerging data sources, sound data governance is an imperative for creating competitive advantage from rich multi-data sets. Data shifts fundamentally from being ‘big’ to being ‘smart’, as these emerging technologies mine information differently.

‘So we are also encouraging our teams who’ve been working in finance for a long time to get them very skilled and trained on some of these new technologies, and the data analytics is a must. So I think a lot of things were happening in Excel, but now with lot of a new BI [business intelligence] tools and analytical tools. So that has become an integrated part of finance function’.

Interviewee

While current business intelligence self-service tools have made significant progress in data capture and information analysis from predecessor centralised and IT-led traditional business intelligence systems and data warehouses, challenges remain. Augmented analytics has the potential to transform the data opportunity in three core areas for professional accountants as navigators: preparation, insight and dissemination. In preparation, augmented analytics will reduce the reliance on finance professionals to source and clean data from disparate data channels; it will be able to process exponentially growing volumes of metadata through clever algorithms, identifying connections between the data that neither humans or prevailing BI tools can handle; with the

The data navigator, by looking to augmented analytics technologies, can start to play an essential role in helping coordinate and join up information insight right across the organisation and support much quicker and more agile decision making.

fusion of augmented analytics and natural language processing, insights and connections between the data will be much better presented, much more visible and easy to comprehend at the push of a button or in response to voice activation; and dissemination at speed will be made much easier as social media platforms and sharing technologies are increasingly adopted. This is the professional accountant leveraging technology to build clever analytics models to support business outcomes, drawing better insights from massive data sources and delivering just-in-time recommendations to drive better business decision making and performance. And it brings a much more ‘visual’ element to sharing analytical insight.

This step change in analytics capability is the future for professional accountants as data navigators in the organisation, being front and centre right across the end-to-end analytics process, capturing and relaying organisational insight supported by new levels of connectivity and driven by democratised and less hierarchical organisational structures or traditional silos between functions. By looking to augmented analytics technologies, the data navigator can start to play an essential role in helping coordinate and join up information insights right across the organisation and support much quicker and more agile decision making. Analytics transformation demands a new way of working in the finance team and a new mindset from professional accountants too (Figure 5.7).

The data navigator role also builds on many of those core capabilities in financial management, which will remain essential to the future skill set of professional accountants. Think, for example, about the future needs of businesses in understanding how to invest effectively with a proliferation of new types of investment opportunities, or the need to understand emerging sources of financing. Capital investment appraisal itself can become even more challenging in an environment which is disruptive and fast moving. The data navigator will need to bring a strong external outlook, taking information from different external sources, for example, to financially model different business dynamics and scenarios to understand strategy implications. The data navigator may also have more specific finance skills, for example in treasury or working capital management. They will be adept at considering how the application of technologies can improve efficiency in these core responsibilities, as well as ensuring that any specific regulatory requirements and risks relating to financing are managed effectively.

But the provision of organisational insight across all these areas also needs to be explained well, and this is at the heart of the professional accountant as a data navigator and business partner. Data from all sorts of expanding sources and of all types may be collated with less effort, the technologies may be increasingly adept at ‘presenting’ potential analyses to be considered, and provide new instantaneous ways to share and take action, but the narrative still needs colour because all organisations operate in a context.

FIGURE 5.7: Augmented analytics and algorithms have the potential to transform the end-to-end analytics process

Business question:	Data origination:	Data preparation:	Data analysis:	Insight and reporting:	Lessons learned:
Understanding what we are trying to solve	Obtaining / Sourcing the raw data to answer the question	Making the data fit for use/purpose	Building the data analytics model and generating results	Establishing how the data results are relevant to the business question and report back	Ongoing review of end to end process for continuous improvement

Source: ACCA 2019

The professional accountant as the data navigator is trading retrospective analytics for quicker, future-looking insight and forecasting.

The professional accountant as the data navigator is trading retrospective analytics for quicker, future-looking insight and forecasting. They are deploying emerging analytical tools and techniques and shifting towards deploying the outcomes of predictive analytics to understand better what may happen in the future and to advise the organisation more effectively. They are much more responsible for achieving business outcomes and are increasingly measured and rewarded on these. They can compute different scenarios more successfully and present the trade-offs to senior management and leadership of the organisation more succinctly, and influence the decisions taken. They may have to be comfortable working with data that may not be 100% accurate, balancing the need for taking decisions expeditiously with accuracy (ACCA 2019f). In the face of greater uncertainty and disruption, businesses need to engage in the wider ecosystem to understand business problems and bring new innovative solutions to bear (Figure 5.8). The data navigator will be increasingly operating and interfacing with different

teams and external stakeholders in a much wider ecosystem, building trusted and collaborative relationships that share data and drive collective innovative insight from much wider data sources to resolve particular business issues.

“The business partner role is a natural gateway. You become the finance business partner, for example, in the supply chain, that’s a feeder role to potentially becoming a supply chain director or say a procurement director’.

Interviewee

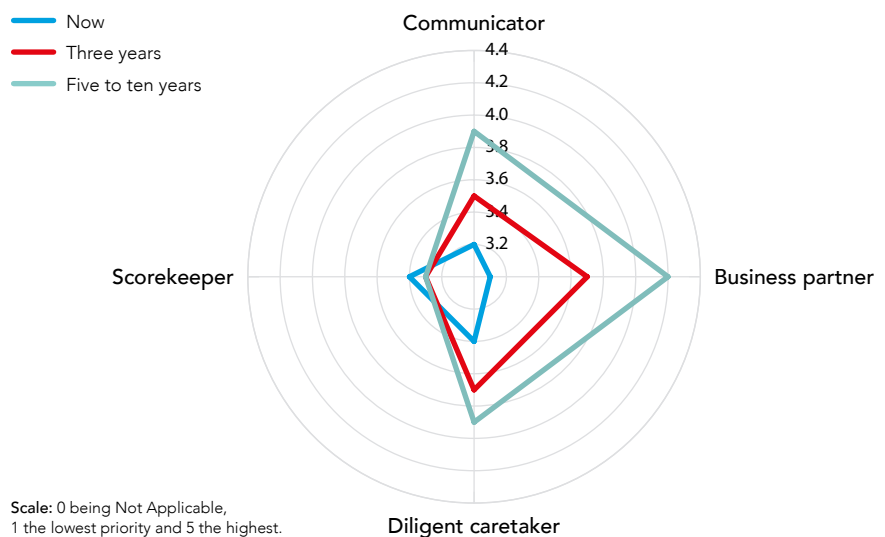
“The big change is around data: both within the organisation and outside, economic and non-economic data: everything is relevant’.

Interviewee

“There is a social network, there is a business network, there is a system network. All of this has to be connected. There’s a lot of analytics and different models which are getting created’.

Interviewee

FIGURE 5.8: The shifting balance in finance activities: the finance four-box model



Scale: 0 being Not Applicable, 1 the lowest priority and 5 the highest.

Source: ACCA and PwC 2019

The digital playmaker is the accountant as a technology evangelist in whatever sector they work. They have deep and growing understanding of technology possibilities, and are essential to driving technology adoption in organisations.

5.4 THE DIGITAL PLAYMAKER

The digital playmaker is a technology evangelist. They see remarkable possibilities for emerging digital tools in transforming the organisations in which they work. They are champions of technology adoption and data governance within the organisation. They look to connect across teams and functions to leverage the power of technology. They may focus on digital implementation programmes or have specialised expertise in particular finance and business technologies. They understand that digital transformation in today's global economy is the lifeblood of future sustainable organisations.

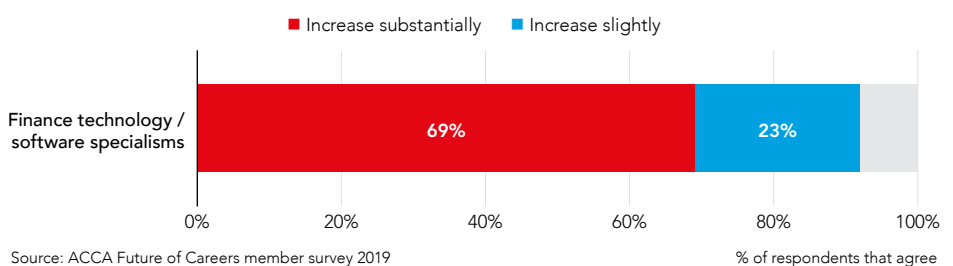
- Digital technologies continue to transform the smart automation agenda.
- Deeper expertise in automation and cognitive technologies is increasingly prized.
- Building robust technology roadmaps is a core opportunity.
- Cloud transforms technology opportunities for teams.
- Data governance becomes a growing imperative.
- Helping finance teams connect processes and technologies across functions is key.

The digital playmaker is the accountant as a technology evangelist in whatever sector they work. They have a deep and growing understanding of technology possibilities, and are essential to driving technology adoption in organisations. From robotics to machine learning, they focus on transforming finance and business operations and championing digitally enabled teams. They champion better data governance and focus on working across organisations and particularly with technology teams to drive productivity and better decision support processes through technology adoption.

The automation imperative is one obvious area where the digital playmaker can excel in the future. Finance teams have a long

tradition of implementing tactical and bespoke automation fixes around discrete finance processes using Excel or elementary workflow tools, through to wider enterprise resource planning (ERP) transformation initiatives where automation is a core component. From macros to optical character recognition to traditional IT process programming, automation isn't a new agenda in finance teams or across the profession (ACCA, CAANZ and KPMG 2018), but it is an area that will continue to grow. Enter robotics, which is transforming the automation agenda. For the digital playmaker perhaps the focus is on driving process efficiencies or reducing cost, or possibly the imperative is improving automation control frameworks or driving process visibility.

FIGURE 5.9: Expected change in opportunities



‘People expect the finance team to help to streamline data acquisition, data storage, data security and data utilisation’.

Interviewee

Whatever the catalyst, the automation opportunity across all sectors and types of businesses is highly significant, and it presents professional accountants with new emerging opportunities to add value to ‘smart automation’ strategies (Figure 5.9). For the digital playmaker this isn’t just about implementing shiny new technology tools – this is a broader contribution, starting with understanding and mapping out key finance and organisational processes to help eliminate, simplify and drive standardisation. They can play a key role in championing the automation potential, and then help set up frameworks for opportunity identification, assessment and prioritisation. They can help join the dots on other automation initiatives, help drive proof of concepts and map out existing technology infrastructures. The digital playmaker may work closely with colleagues in the technology team, once processes are reconfigured, to help articulate the most relevant automation technologies to be used in finance, as well as supporting programming, testing and ensuring appropriate integration of the software. Here they may bring specific process management, ‘lean’ and six sigma capabilities to help re-engineer processes. Alternatively, they may help bring together finance subject matter experts with process experts and system architects to help implement new automation software. The digital playmaker may need to combine both deep accountancy expertise in a niche process area with process redesign skills to ensure automation solutions are sustainable from both an operational and accounting perspective. They can also support initiatives such as automation vendor selection, help define infrastructure requirements or help build roadmaps for further scalability.

‘Understanding the digital footprint of the organisation and see[ing] technology in a broader enabling mechanism, and to bring it together and understand how you can be the enabling leader of the organisation. How can we be more efficient? How can we continuously monitor? And where do we spend or allocate our resources across the digital footprint of the organisation?’

Roundtable participant

As automation scales up in larger organisations, the digital playmaker can play a growing role in aligning finance automation strategies to wider digital transformation initiatives. Here, one growing area of opportunity is the establishment of Automation Centres of Excellence that bring together the expertise of local end-user finance teams with dedicated automation experts. These centres help drive coordination and scaling of automation activities, ensuring greater governance over consistent deployment, reduced risk and better coordination of automation technology application across disparate parts of the organisation. As opportunities scale up with robotic automation, digital playmakers may take on the role of robot developers, coding instructions for robots to follow, or be more involved in oversight of maintenance of automation software, or focus more on vendor relationships.

‘You might come in as a junior accountant, but then say after a few years there’s a career path over here into the tech part of the business’.

Interviewee

The digital playmaker has a key role to play in helping to build and systemise this capability through technology adoption and promoting the use of pilots in demonstrating the potential of new emerging technologies.

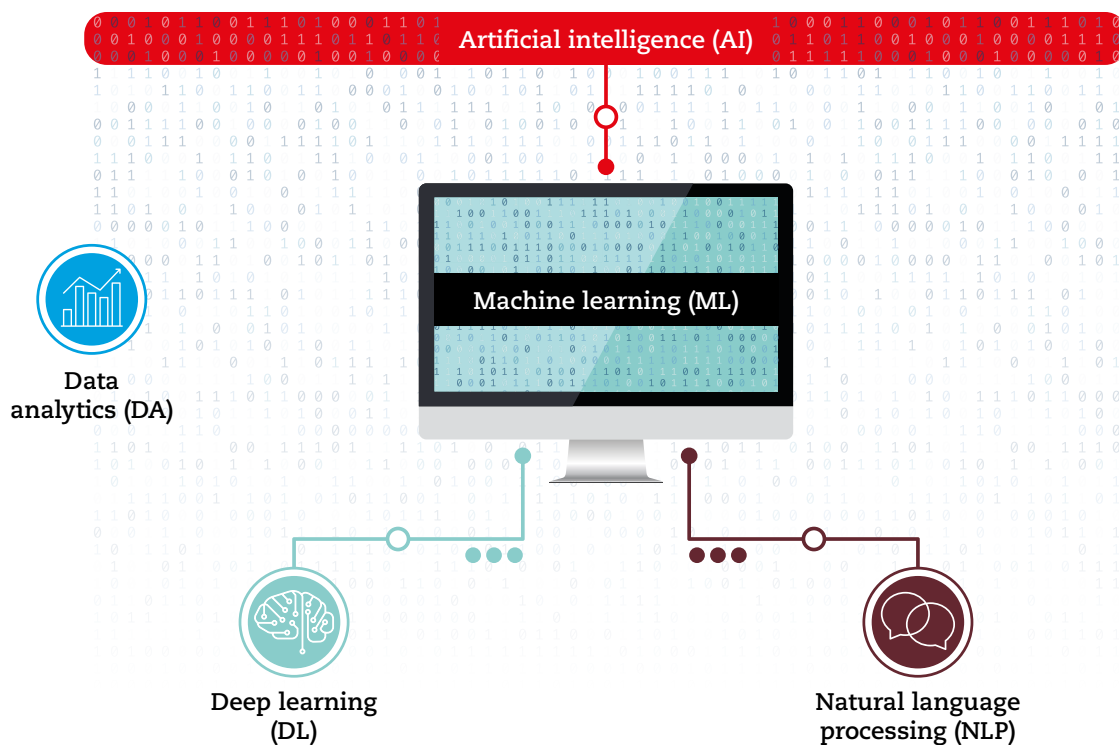
But, of course, for the digital playmaker, the opportunities to make a difference to organisations and champion technology adoption now goes way beyond the automation agenda. There are wider significant opportunities with emerging cognitive technologies, but this area is complex (Figure 5.10).

The growth in analytics technologies, machine learning (ACCA and CAANZ 2019b), cloud applications and social media tools (ACCA 2017d) demands an holistic approach to technology adoption in finance teams if they are to unleash the benefits of faster reporting, rolling forecasts and real-time data insights. The digital playmaker has a key role to play in helping to build and systemise this capability through technology adoption and promoting the use of pilots in demonstrating the potential of new emerging technologies. They may even have a role to play in driving technology self-service initiatives beyond finance teams and across the organisation. Some of these technologies suggest promise but in reality are some way off wide-spread adoption: for example, use of blockchain in reconciling information between organisations and third parties.

‘I think the role will be changing for the CFO, breaking down silo’s and driving collaboration, ensuring that everybody is working together and asking: “how do you leverage the technology?”’
Roundtable participant

As CFOs look to design wider finance transformation initiatives that pull together people, process, data and technology components, the digital playmaker can play a critical role in helping finance leadership understand how a technology-enabled finance team can execute the business strategy as well as understanding the business case for technology investment. They are instrumental in identifying the impact of technological change on both finance teams and the wider organisational ecosystem, having a view on talent and skills implications, and computing associated risk and governance considerations. They will have new opportunities for designing the finance digital roadmap, which provides a blueprint for technology adoption. Here, the digital playmaker can play a pivotal role in aligning technology strategy within finance to the finance strategy in a way that supports better business outcomes.

FIGURE 5.10: A wide range of terms are in use for cognitive technologies



‘Increasingly professional accountants go into other areas and reach into technology or operations because everything ties back to the financials. So they can see the whole big picture’.

Interviewee

Today, however, you can’t talk about technology roadmaps and strategies in finance without talking about the cloud. The digital playmaker is a key catalyst in championing the growing adoption of the cloud across businesses and organisations to drive flexibility and agility in decision making and reporting. As the market for cloud-based finance applications rapidly expands, CFOs are faced with an almost overwhelming ‘pick and mix’ choice of applications. Well-established large-scale ERP vendors are increasingly competing against start up ‘best of breed’ providers who are building in cognitive tools and blockchain capabilities to integrate into the ‘Digital Core’. These open architecture vendors plug in their super apps and micro-services to enhance process efficiency, reduce cost, and faster delivery of insights, increasingly shifting to real-time finance reporting cycles and forecasts. The digital playmaker is fundamental to coordinating this transformation of finance delivery and joining the connections across emerging plug-in cloud-based digital systems, as well as helping drive the cultural shift and different mindset these transformation activities depend on.

‘If there’s a system implementation project on the horizon, the financial accountant is thrown at it, because it gives them something different to think about’.

Interviewee

But all good digital playmakers know that it doesn’t matter how good your digital strategy is, or how many shiny new tech tools you introduce into the organisation, successful outcomes are still driven by the quality of data at your disposal. The digital playmaker is a champion for outstanding data governance across the organisation.

Finance professionals have a key role to play in maintaining control and integrity of data across organisations, given the enterprise-wide purview that professional accountants and finance teams often have. This isn’t an ‘ownership’ issues for finance or professional accountants, merely a significant opportunity for them to influence the agenda, driving the imperative for one source of data truth, data that is accessible, clean, timely, accurate, controlled, trusted, consistent, legal and linked to the value drivers that truly matter in the business.

‘I don’t need somebody in the middle to translate, because what comes out of the system is less meaningful. But who’s the person that helps the person build the bot that creates that? So there’s a there’s almost an engineering aspect to the role’.

Interviewee

‘What we have seen in finance over the last 15 years is that it is the finance function that was starting to play a more critical role in asking whether or not we were seeing the benefits of technology or implementing the right technology’.

Roundtable participant

‘There are a lot of initiatives which are currently in progress around digitalisation and automation with the use of new technologies like the Internet of Things’.

Interviewee

‘As the workforce is augmented by robots and cognitive agents, Finance will need humans who can build and connect systems that interact with other systems’. ■

Source: Deloitte 2018a

As corporations of all sizes and in all sectors face increasing demands from regulators, investors, and customers, and a wider stakeholder constituency, there is more pressure to account for value creation in its widest sense.

5.5 THE SUSTAINABILITY TRAILBLAZER

The sustainability trailblazer is at the heart of performance management in the organisation. They play a key role in establishing frameworks that capture, evaluate and report on the activities that truly drive value and in ways that are much more transparent and meaningful to the outside world. They will transform management accounting fit for a multi-capital world and see emerging opportunities with better external disclosures to ever-growing stakeholder groups. They understand that aligning the pursuit of profit with the pursuit of purpose is integral to building sustainable future businesses.

- Stakeholders demand better explanations of value creation and delivery of organisational outcomes.
- Accounting for the business rather than the balance sheet is an imperative.
- Planning processes that connect process, people and systems to report performance need to refocus.
- Key value drivers remain misunderstood.
- Reporting tools have the potential to transform data capture across financial and non-financial information.
- From climate risk to social impacts, external reporting requirements grow.

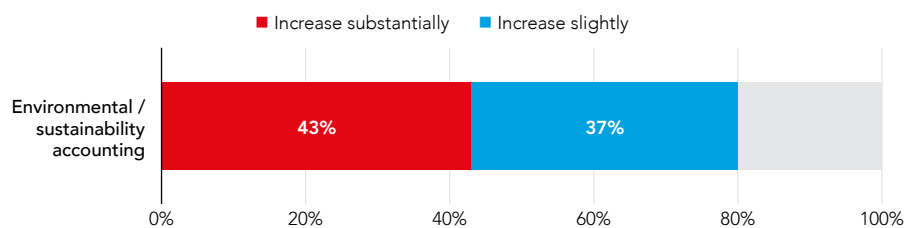
As purposeful businesses seek to create long-term value in the face of mass disruption, big, existential questions are increasingly asked of corporations and the role they play in society. Whom do companies have to answer to? How do they really create long-term value? What constitutes good corporate performance? How should it be measured? How should it be reported?

As corporations of all sizes and in all sectors face increasing demands from regulators, investors, and customers, and a wider stakeholder constituency, there is

more pressure to account for value creation in its widest sense. There's an imperative to report on issues that extend beyond traditional financial reporting, recognising the wider social, community and environmental impacts that are integral to how companies create long-term value.

Today's business models are increasingly disrupted and value is created and destroyed in different ways and across multi-capitals; intangible assets increasingly represent a growing proportion of the value of an enterprise.

FIGURE 5.11: Expected change in opportunities



Source: ACCA Future of Careers member survey 2019

% of respondents that agree

‘There may be new ways for example for the accountants to design management control systems and performance management systems to meet the new digital age’.

Interviewee

Evolving business structures require different types of capital to drive growth and return, from traditional manufactured or financial capital, through to the deployment of social, intellectual, natural and human capital (Figure 5.12).

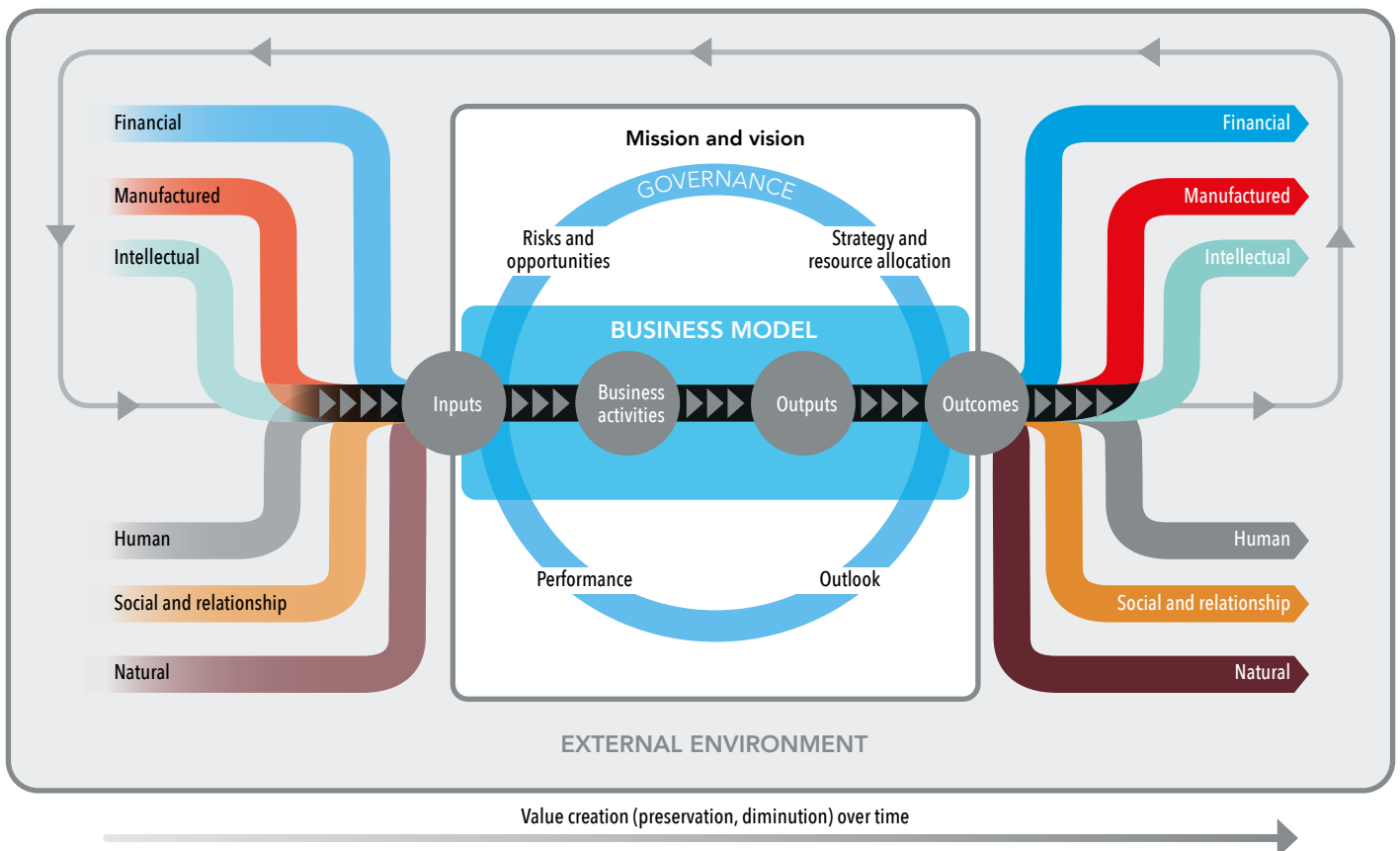
These will be deployed in various ways to generate desired business and wider societal outcomes. The imperative is to meet growing demands for better accountability and reporting on how these capitals are deployed and their contribution to creating long-term business value.

This heralds an era of growing and more holistic enterprise performance management. Traditional management information anchored in a company’s financial performance is too often disconnected from organisational strategy; better reporting starts to piece together information which is often siloed across the organisation to help develop a more informed picture of how value is created and risked across the organisation. It switches the emphasis on reporting from a

backward-looking narrative to something more forward looking, and it brings more transparency to how an organisation is governing all the resources at its disposal, which, when combined, together create value over the longer term.

The sustainability trailblazer is at the heart of the future of performance management in the organisation. They will play a key role in establishing systems that capture, measure and report on the activities that truly drive value, and in ways that are much more meaningful and transparent to the outside world, and that are more connected internally. Recognising the shift away from narrow approaches to assessing financial performance alone, they are essential in helping business transform from accounting for the balance sheet to accounting for the entire business through recognising its social and environmental impacts and dependencies. This is driven by a much wider imperative, a need for organisations to align the pursuit of profit with the pursuit of purpose in a much more integrated way as part of the very fabric of running a business from day to

FIGURE 5.12: IIRC business model: transforming capitals into outcomes



Source: ACCA and CFA 2019

If professional accountants understand their rising opportunity for creating sustainable organisations, they can be prominent voices for a better and more holistic understanding of the long-term value-creation story and lead this enterprise-wide agenda.

day. This recognises the inherent trade-offs businesses face as they deploy different capitals and allocate resources to generate growth. Professional accountants and finance teams, already leading financial performance management processes and external financial reporting activities, coupled with their increasing purview across the organisation and growing access to enterprise-wide data, are the natural choice to lead this agenda. To put it another way: it is the transition from the chief financial officer to the chief performance officer.

This transition isn't just about new reporting frameworks or better dashboards. It starts with culture and the organisation's appetite. If professional accountants understand their rising opportunity for creating sustainable organisations, they can be prominent voices for a better and more holistic understanding of the long-term value-creation story and lead this enterprise-wide agenda. This is about being an evangelist for changing the very mindset of the organisation. The championing of 'integrated thinking' is core to the sustainability trailblazer opportunity, driving a much more integrated view of business performance and communicating and reporting on it in a much more effective and transparent way as business models evolve. But driving a culture of truly integrated thinking is challenging and time consuming, and demands navigation of a wide range of cultural and people challenges.

The sustainability trailblazer will play a central role in the strategic planning process of the organisation and build further on their core management accountancy skills to take a wider purview across all organisation capitals. They will be responsible for understanding the internal and external drivers of the organisation's strategy, through to establishing performance management frameworks at the heart of the business planning process. They will have a sharp understanding of how the risk landscape is evolving across the different capitals and champion the importance of risk awareness and knowledge of control processes as an integral part of planning

and performance activities. The sustainability trailblazer will be skilled in applying innovative and fast-emerging new budgeting techniques to provide quicker business information to management and improve controls and reporting of organisational performance, as well identifying areas for value improvement or cost savings. They will continuously look forward, too, and seek to introduce more informative financial forecasting processes as well as providing critical commentary and variance analysis or assessing evolving investment and capital expenditure plans to support business strategy.

Success across all these areas is dependent on driving a more integrated approach to planning in the business, and better governance of social and environmental risks and resource allocation, which means building a more integrated information architecture. Here professional accountants and finance teams have a natural advantage, as they are already seen as the de facto function with enterprise-wide planning responsibilities. A key area of focus is the need to bring different aspects of the enterprise planning process together across different parts of the organisation, helping drive better IT system integration and data quality, as well as connecting disparate parts of the organisation, such as finance, secretariat, legal and risk, to ensure a better enterprise-wide visibility of the key risks and value drivers within the organisation, as part of planning activities. Better connectivity in planning processes enables senior management and company leadership to understand how the generation of value is being determined across different time horizons, as well as bringing transparency to the risks and opportunities for strategic decision making, and informing the development of controls to identify and mitigate or neutralise risks relating to wider value creation. This can be particularly challenging because wider non-financial and sustainability information often sits in disparate systems without the same levels of control and reporting objectives as financial capital information. But achieving this will provide better strategic insights to improve performance, enhance internal reporting and help drive further operational efficiencies.

The sustainability trailblazer has an opportunity to champion digital adoption and the evolution of tools with improved ability for capturing data in more meaningful ways.

Opportunities for the sustainability trailblazer will be further driven by evolving needs in external reporting too. The sustainability trailblazer plays a key role in core reporting activities. They continue to ensure that the organisation meets its external financial reporting responsibilities and that financial statements are compliant with all relevant accounting policies and accounting standards across all types of business entities and reporting structures. They will be skilled in interpreting financial statements and compiling appropriate narratives and disclosure notes on a wide range of financial and non-financial indicators, and they will do so being fully conversant with external developments to ensure that corporate disclosures offer a consistent narrative, while exercising suitable levels of professional scepticism. They will need to continue to be skilled in and knowledgeable about trends in accounting standards developments and their applications for compliance purposes.

But increasingly the sustainability trailblazer will seek to promote the disclosure of non-financial information to stakeholders and embrace emerging wider reporting frameworks. Through promoting and championing much more holistic and transparent reporting, the sustainability trailblazer has new opportunities to knit together the narrative of the organisation in a way that explains the business model better internally and externally, including how the organisation has achieved its outcomes and the ways in which value has been created across different enterprise resources and capitals. They can tell a more complete story of how in the future

the business model and financial strategy are sustainable. This is the professional accountant as integral to protecting the sustainable brand of the business in a connected world where bad news travels fast. But they can also be involved in more specific reporting initiatives. Across the broader reporting landscape there have for some time been growing and widening demands for regulatory reporting on wider ESG issues and we have seen a proliferation of reporting frameworks emerge, such as the Global Reporting Initiative, Climate Disclosures Standards Board, the Sustainability Accounting Standards Board, and the International Integrated Reporting Council. Now the focus is on convergence to bring a more meaningful and joined-up approach to corporate reporting.

'There is a clear role for finance teams to be more engaged in the creation of sustainable value. Their ability to understand and communicate financial risk is essential as new areas of risk governance emerge, such as climate change. Their skills are critical for faithful and rigorous disclosure, and the creation of controls that inform this disclosure, particularly in a world that requires investment-grade ESG data. And with a unique view across a business model, from proposition to creation and capture of value, the role of finance professionals in collaborating with and leading on innovation that supports multi-capital value creation is essential.' ■

Source: ACCA and CFA 2019

New data sources will emerge to meet the demands of measurements to support the SDGs. There is a clear role for the profession in ensuring data is reliable and that it is communicated effectively so that it can be used to aid reporting against them.

One specific growing area of importance is the Sustainable Development Goals (Figure 5.13).

The SDGs have been called ‘a purchase order from 2030 for business and government action today’. They are a common-language roadmap for governments, business, investors and civil society to follow to transform their economies and build prosperous societies, providing a framework for understanding risk and the external environment in a way that is better suited to the new nature of the global economy and the future of global growth.

The Business and Sustainable Development Commission (BSDC), a group of global business leaders, has estimated that achieving the SDGs can unlock \$12 trillion of market opportunities in four areas of economic activity and generate up to 380m jobs (BSDC 2017) (see Figure 5.14).

Digital is key to the SDG imperative. We know that technology will be a driving force of future engagement with the SDGs as it will in so many other spheres. New data sources will emerge to meet the demands of measurements to support the SDGs. There is a clear role for the profession in ensuring data is reliable and that it is communicated effectively so that it can be used to aid reporting against them. The 2030 Agenda, which sets out the 15-year plan for achieving the SDGs, provides a common language for a range of participants – governments, business, finance and civil society. Being conversant in this language will become increasingly essential for professional accountants. If the goal is to provide all of humankind with the means to live a good life on an ecologically flourishing planet, the challenge ahead is a formidable one. The sustainability trailblazer can take a leadership role in connecting the private sector, government and finance through this agenda.

FIGURE 5.13: The UN Sustainable Development Goals



Source: United Nations Development Programme 2015

FIGURE 5.14: 60 SDG-related business opportunities in four systems

	 Food and Agriculture	 Cities	 Energy and Materials	 Health and Well-Being
1	Reducing food waste in value chain	Affordable housing	Circular models – automotive	Risk pooling
2	Forest ecosystem services	Energy efficiency – buildings	Expansion of renewables	Remote patient monitoring
3	Low-income food markets	Electric and hybrid vehicles	Circular models – appliances	Telehealth
4	Reducing consumer food waste	Public transport in urban areas	Circular models – electronics	Advanced genomics
5	Product reformulation	Car sharing	Energy efficiency – non-energy-intensive industries	Activity services
6	Technology in large-scale farms	Road safety equipment	Energy storage systems	Detection of counterfeit drugs
7	Dietary switch	Autonomous vehicles	Resource recovery	Tobacco control
8	Sustainable aquaculture	ICE vehicle fuel efficiency	End-use steel efficiency	Weight management programmes
9	Technology in smallholder farms	Building resilient cities	Energy efficiency – energy-intensive industries	Better disease management
10	Micro-irrigation	Municipal water leakage	Carbon capture and storage	Electronic medical records
11	Restoring degraded land	Cultural tourism	Energy access	Better maternal and child health
12	Reducing packaging waste	Smart metering	Green chemicals	Healthcare training
13	Cattle intensification	Water and sanitation infrastructure	Additive manufacturing	Low-cost surgery
14	Urban agriculture	Office sharing	Local content in extractives	
15		Timber buildings	Shared infrastructure	
16		Durable and modular buildings	Mine rehabilitation	
17			Grid interconnection	

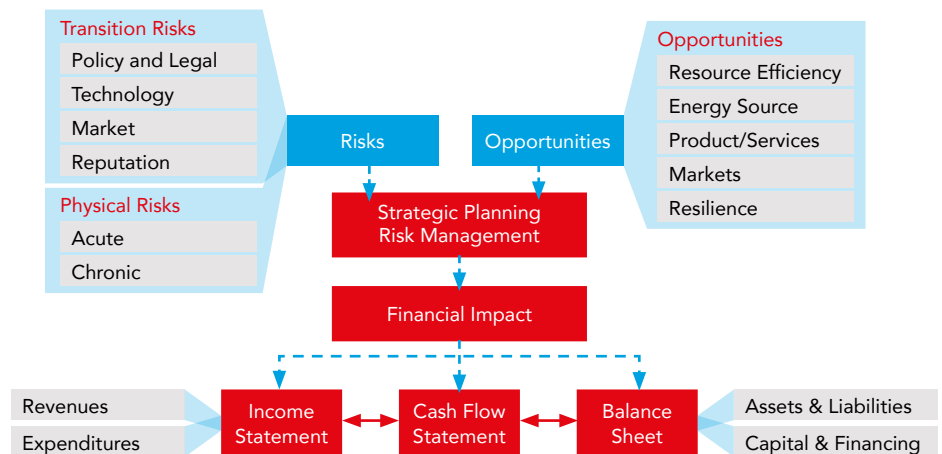
Source: BSDC, 2017

On the use of natural capital the sustainability trailblazer can champion decision and reporting tools such as the Natural Capital Protocol and the CDSB framework for business adoption.

There also are other opportunities for the sustainability trailblazer. The foundations of wider corporate reporting have been laid and a significant but incremental change in corporate behaviour is taking place. But there is growing pressure to move to the next phase, one that sets free an emergent phase, that meets worsening risks, that responds to major issues such as extinction threats, and that truly creates a means for investing in innovation and improving returns to society in new sectors. On climate risk, the Taskforce for Climate-related Financial Disclosures (TCFD) recommendations set out a new way of approaching corporate reporting that responds to the current crises and demands by dramatically improving existing non-financial reporting (see Figure 5.15) with a focus on physical and transition risks to a business from climate change and what they mean for balance sheets, income and cash flow.

On the use of natural capital, the sustainability trailblazer can champion decision and reporting tools such as the Natural Capital Protocol and the CDSB framework for business adoption. They have a fantastic emerging opportunity to help businesses better monitor, evaluate and report on the social impacts they are creating, thereby providing more transparent reporting and signals for financial markets and the growing interest of investors. They can also contribute to circular business model innovation, which will require the skills of finance to restructure how products and services are designed and delivered. This can support organisations in transitioning from management of social and environmental risks to providing a place for investment that is looking for returns with a high societal impact. And they can play a much more integral role in helping organisations build purpose-led strategies that provide a way for ethics to come to the fore and for mission-led businesses to embed their values into business performance over the longer term.

FIGURE 5.15: TCFD climate-related risks, opportunities and financial impacts




Source: TCFD 2017



6. What does this mean for my own career?

What are the implications for individuals navigating their own future careers from this research? Here are some suggestions for reflection that may help.

<p>#1 Be adaptable</p>	<p>#2 'Get' tech</p>	<p>#3 Take 'risks'</p>	<p>#4 Re-learn</p>	<p>#5 'Work' your brand</p>
<p>The new world of work prizes a flexible approach to building a career. Stepping stones are less obvious and future roles less certain. Having a career mind-set that is flexible and that can navigate uncertainty as the profession transforms is essential.</p>	<p>With future jobs in the profession technology and data rich, being familiar with evolving technology is 'table-stakes' for building a future career in accountancy. Digital is a competency transcending across all roles and sectors.</p>	<p>With career paths less certain, thinking laterally about future job roles is critical. This may necessitate taking new opportunities that could be considered higher 'risk', or moving laterally in the organisation. But building out different, broader experiences should pay dividends longer term.</p>	<p>A fast changing world of work demands a rethink in our approach to learning new skills. It's important to continue to unlearn and relearn as careers evolve and workplaces transition. This future proofs capabilities and ensures enduring competence.</p>	<p>Technology is changing how organisations recruit and how candidates source new career opportunities. Having a social 'presence' and tapping into digital networking opportunities is essential. Online career visibility is vital in the digital age.</p>
<p>#6 'Reach out'</p>	<p>#7 Learn data</p>	<p>#8 Find sponsors</p>	<p>#9 Re-think the CV</p>	<p>#10 Do what you love</p>
<p>Digital is transforming work connectivity and providing new opportunities to share, and add value. Team working will transform as collaboration across functions becomes ever more important to achieve business outcomes. Good relationship skills will be increasingly prized.</p>	<p>Accountants won't be expected to become data scientists. But building skills in data analysis and information understanding will be a cornerstone of future roles. Using data to drive insight and added value cuts across jobs in the profession as we look forward.</p>	<p>With 5 generations in the future workforce, there are brilliant opportunities to share experiences. With different entry and exit points into the profession, the diversity of talents across all ages is enriched. This is fertile ground for sponsorship and learning from others.</p>	<p>The CV of the future is skills centric not job-title centric. Individuals need to 'sell their story' differently to respond to a fast changing world of work. A focus on how accumulated job roles have built the skills most sought after is vital. 'Competence' is king.</p>	<p>There is no substitute for passion. As jobs are reimaged, there are fantastic opportunities for accountants to have careers which are brilliant and meaningful. Finding a vocation with purpose is key to career fulfilment, There has never been a better opportunity to do so.</p>



7. Employer considerations

What does this research tell us about how employers should be responding to the changing world of work and new emerging opportunities for professional accountants? Here are some brief questions for reflection.

#1 Does our organisation have a clear 'purpose' and is this communicated?

It's more important than ever for organisations to demonstrate their wider contribution to society, and employees increasingly look for careers that are purposeful and for jobs that have 'meaning'. Employers that can frame and articulate their broader purpose successfully are more likely to be attractive to potential employees in the future and this can help with issues such as employee engagement and retention.

#2 Are career 'paths' in the organisation fit for purpose?

As the needs of employers change, and different, new roles emerge, it's important to take a critical review of career paths in the organisation. Are they visible? Can they help build the skills that will be needed in the future? Do they support building a pipeline of retained talent for the future?

#3 Do we sufficiently promote internal collaboration?

It's important to forward plan for talent to address expected future skills gaps in the organisation. One way is by considering how the enterprise facilitates internal collaboration, for example, cross-functional team-based projects that can help foster a culture of shared learning across the organisation. Another way is by encouraging increasing internal movement of talent beyond 'traditional' functional silos or accepted career paths. This requires lateral thinking by employers with a long-term, cross-organisational view of skills development and experiential learning opportunities.

#4 How do we support the learning of our employees?

This report indicates that learning opportunities are transformative for professional accountants. In the face of increasingly personal career journeys, and new skills being demanded by employers, this means continuous learning is essential. Employers need to consider how they are creating a learning culture across the organisation and the right environment for individuals to source learning opportunities for themselves, as well as how they are leveraging new digital advances to enrich the learning offering.

#5 Can we harness the power of multiple generations in the workplace?

While it is important not to over-generalise about generational preferences vis-à-vis each other, the digital natives now starting to enter the workforce are the first generation raised on social networks and will be touchscreen-technology savvy. As the importance of technology adoption in organisations continues to rise, it's important for organisations to tap into this 'know-how' and share across the workforce. There may be new opportunities for interventions such as reverse mentoring. Similarly, older workers who have had a career change and who are entering the profession for the first time will bring enriched and different experiences to the workplace, which should be beneficial across the organisation's workforce.

#6 How do we position technology as an opportunity for the workforce?

It's important that employees clearly see the opportunities that technology can present to them for driving greater workforce connectivity, and for creating new roles, enriched career experiences and more valuable and meaningful work. While automation will replace some roles and tasks across the profession, technology will create new exciting roles too. Professional accountants need to be increasingly conversant with these digital developments. It's vital that employers continually communicate the benefits of digital adoption for individuals.

#7 How can we leverage the power of inclusivity in our workforce?

Workforce inclusivity practices that support a more 'diverse' workforce make good business sense. This isn't just a moral obligation. Workforces that are more diverse in a range of different aspects, for example gender or ethnicity or culture, are seen to be more innovative, and various studies continue to identify correlations between different diversity measures and improved organisational performance. Employers need to consider how they can ensure that their workforce and leadership teams are diverse, and understand the different inclusivity strategies that can be adopted.

Conclusion

ACCA's research continues to suggest significant career opportunities for professional accountants as we look forward in the coming decade.

Professional accountants have always played an important role in helping create and protect sustainable organisations, and this role will become of even greater significance in the next few years. In whatever way accountants undertake their responsibilities, whether this is helping manage organisational risk more effectively, providing information analysis that helps improve internal decision making, or producing enriched reporting that gives a more complete picture of the 'performance' of organisations, professional accountants are integral to building sustainable businesses across the world.

The biggest impact on the future of the profession will be technology. Our research suggests that digital developments are part of the opportunity story, a chance to reframe the role of professional accountants and provide new opportunities to add value to businesses. This will be underpinned by the increasing automation of routine, transactional tasks that free finance professionals to apply their skills elsewhere. As emerging 'cognitive' technologies evolve, there will be new opportunities for the 'nexus' of human and machine where professional accountants can leverage new digital capabilities to make valuable contributions to the organisations in which they work. This research suggests these opportunities will transform in the face of many wider trends changing the profession and the future of work.

The profession should be optimistic about its future. In the face of significant changes, this report suggests that careers will be transformed for professional accountants and career paths will become more variable. We can expect professional accountants to move into increasingly diversified roles in the future, but the fundamental grounding in core financial and business knowledge gained through acquiring a professional accountancy qualification remains as relevant as ever.



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