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MAKING TAX DIGITAL

## FOR YOUR BENEFIT

HOW HAS GDPR MADE  
ACCOUNTANCY FIRMS  
MORE EFFICIENT?

## DIGITAL LEADERS

New ICAEW president  
Paul Aplin discusses  
his priorities



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The mpg figures quoted are sourced from official EU-regulated test results (EU Regulation 715/2007 and 692/2008 as last amended), are provided for comparability purposes and may not reflect your actual driving experience. Information correct at time of going to print.

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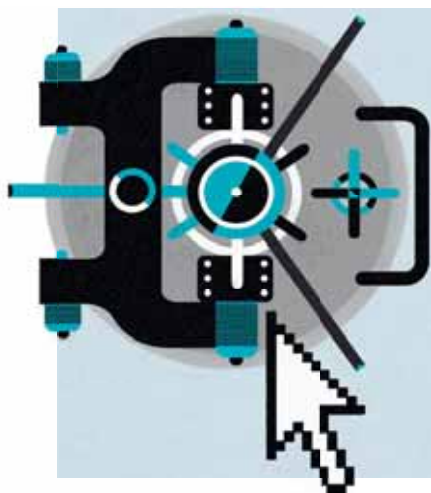
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# Will robots really steal our jobs?



A somewhat 'clickbaity' headline, this is the title of a recent report from PwC endeavouring to answer the question every ACA student asks us when we meet, "Will I still have a job in 10 years' time if I take your qualification?" The report was launched at a recent roundtable I moderated called 'The coming waves of automation' and I commend the report to you.

The report builds on the well-respected (and rather pessimistic) research by Oxford Academics Frey and Osborne in 2013, which predicted 47% of the US workforce was at high risk of automation within 20 years, and the (rather less pessimistic) later research by the OECD which put that figure closer to 14%.

Rather than seeing a rather one-dimensional view of people's roles, PwC's report considers different variables including industry sector, occupation, gender, age and education level. They forecast three waves of automation. The Algorithm wave focuses on simple tasks and is largely underway. The Augmentation wave focuses on the automation of repeatable tasks and has also started. The Autonomy wave focuses on the automation of physical labour and will not come to full maturity until the 2030s. The report then uses these lenses to consider the impacts of automation on a variety of factors with more granular findings - for example females' roles are likely to be at higher risk, but only in the shorter term; this is also considered by age, sector, education level, occupation and country. So in answer to the question, "Will I still have a job in 10 years' time," there are now a number of factors to consider.

The roundtable itself then went on to consider the role of regulation, with a speaker from the EU, and the impact on labour and the necessary skills needed to remain competitive amidst growing automation, with a speaker from the Trade Union Advisory Committee to the OECD. My biggest takeaway was the comment, "the strongest defence against automation is the level of education" - at last some good news for ACAs!

The question of what skills are needed permeates pretty much every conversation we are having with our stakeholders - internal and external, and help guide our conversations with LPD about the future of the ACA. Fittingly, future skills was also the subject of a virtual roundtable where we asked our younger members directly what they thought - you can read their views on page 16.

**Richard Anning**  
Head of faculty

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**ICAEW**

## IT Faculty

### Jeremy Boss Chair

T: +44 (0)1791 293 319  
E: [jeremy.boss@btinternet.com](mailto:jeremy.boss@btinternet.com)

### Nicola Granger Deputy chair

T: +44 (0)7464 652 779  
E: [nic.granger@ogauthority.co.uk](mailto:nic.granger@ogauthority.co.uk)

### Neil Christie Vice chair

T: +44 (0)1753 471943  
E: [neil.christie@iomart.com](mailto:neil.christie@iomart.com)

### Richard Anning Head of IT Faculty

T: +44 (0)20 7920 8635  
E: [richard.anning@icaew.com](mailto:richard.anning@icaew.com)

### Kirstin Gillon Technical manager

T: +44 (0)20 7920 8538  
E: [kirstin.gillon@icaew.com](mailto:kirstin.gillon@icaew.com)

### David Lyford-Smith Technical manager, IT & the profession

T: +44 (0)20 7920 8643  
E: [david.lyford-smith@icaew.com](mailto:david.lyford-smith@icaew.com)

### Mark Taylor Technical manager, technical innovation

T: +44 (0)20 7920 8476  
E: [mark.taylor@icaew.com](mailto:mark.taylor@icaew.com)

### Tracy Gray Services manager

T: +44 (0)20 7920 8526  
E: [tracy.gray@icaew.com](mailto:tracy.gray@icaew.com)

### Contact details

IT Faculty  
ICAEW  
Chartered Accountants' Hall  
Moorgate Place  
London EC2R 6EA UK  
☎ +44 (0)20 7920 8481  
✉ [itfac@icaew.com](mailto:itfac@icaew.com)  
[icaew.com/itfac](http://icaew.com/itfac)

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# NEWS & EVENTS



## ONLINE FILING ENCOURAGED



On 31 May, ICAEW hosted the first ever accountancy stakeholder roundtable meeting at Chartered

Accountants' Hall in London between Companies House and 12 professional accountancy bodies from the UK and Ireland. Representatives from Companies House included Louise Smyth, CEO, and Michelle Wall, finance director, who chaired the meeting.

The roundtable meeting was one in a series of similar groups that Companies House has set up, with others including software providers and other public sector bodies.

At present, some 75% of accounts are filed online and Companies House has a core objective to increase uptake further. However, the remaining paper filings are proving a hard nut to crack. We understand that they tend to be large and medium-sized companies, often serviced by the largest UK accountancy firms.

ICAEW's Nick Reynolds (pictured) did some informal research on this issue in

2016, when we spoke to a selection of large and mid-tier firms about their approach to, and uptake of online filing. In 2016, although most firms said they would like to move to online filing, some had not yet seriously considered it, felt that the Companies House online system was not robust enough, or were restricted by certain types of accounts that could not be filed online.

A few firms were clearly happier to rely on physical signatures and others highlighted that many of their largest clients produced and filed their own accounts in Word.

The accountancy bodies made several suggestions to encourage online filing, including the introduction of a 'filing agent' to mirror HMRC's tax agent model. They also felt that joined up online reporting for both HMRC and Companies House would be beneficial.

Companies House plan for these roundtables to become regular events. If you would like to contribute to the debate now, Companies House has a Customer and Stakeholder Opinion Survey open until 5pm on 7 August. See [tinyurl.com/CH-CoHouseSurvey](http://tinyurl.com/CH-CoHouseSurvey)

## DIGITAL EXPERIENCE IN US TAX SYSTEM

David Lyford-Smith, faculty technical manager, met Nina Olson, the National Taxpayer Advocate of the US tax authority the IRS, in Washington, DC. Olson and her team work from within the IRS to support taxpayers' rights and promote improving practices within the IRS.

The meeting was to discuss Lyford-Smith's latest research into the digitalisation of tax in different countries, published originally as *Digitalisation of Tax: International Perspectives* ([icaew.com/digitaltax](http://icaew.com/digitaltax)). A second edition of the research is planned, with new case studies – including the US.

Olson explained the history of tax digitalisation in the US. The IRS itself is the owner of the two oldest computer systems in the US government, and has dozens of different systems that record various aspects of taxpayers' circumstances. Communication between these systems is trialling or non-existent, and providing a holistic view of individual taxpayers is a challenge. As a result, digitalisation has been slow to expand. Furthermore, the annual budget requisitioning process leaves it unable to fully commit to large multi-year modernisation projects.

There are many lessons to take from the IRS's struggles with its technology. A full write-up will be included in the second edition of the research, which will be released later in 2018.



**FOCUS ON FINTECH IN SINGAPORE**



Building on the recent work on big data in China, the IT Faculty has moved its focus onto Singapore. In

collaboration with the Institute of Singapore Chartered Accountants (ISCA), and ICAEW’s regional office in Singapore, the Faculty is leading a piece of research work on the fintech sector there, its strengths as a hub and how well positioned it is to grow the sector.

Fintech is an important and growing part of economies around the world, with Singapore one of the leading

locations, and therefore there is a lot of interest in understanding the sector there better.

Kirstin Gillon spent a week in Singapore in June to conduct interviews and co-chair a roundtable with ISCA with representatives from fintech start-ups, advisers and investors. This will be supplemented by some key learnings and comparisons with the UK sector, working closely with the Financial Services Faculty to gain relevant insights. The research report will be launched at the end of October with an event in Singapore.

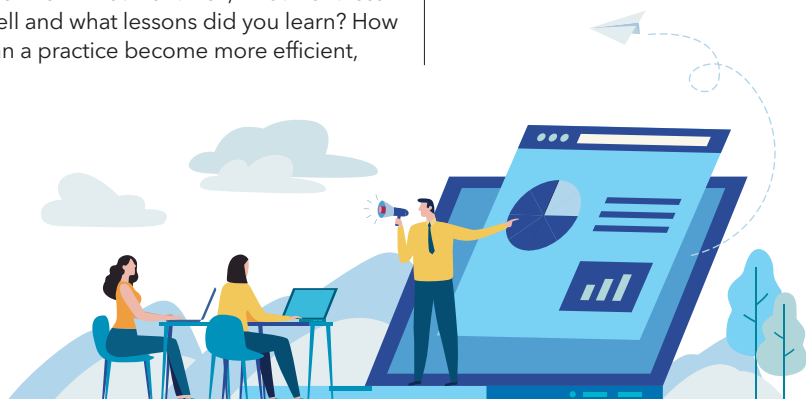


**AUTOMATING FOR THE PEOPLE**

In the autumn, the IT Faculty will be publishing the *Tech Essentials* guide to automating your practice. The aim of the guide is to inform members about the benefits of automating an accounting practice.

We are keen to hear your experiences of automating your practice. We would like know what went well, what went less well and what lessons did you learn? How can a practice become more efficient,

help clients with new services or how can you ensure staff have more fulfilling and engaging jobs? If you have any experience of automating your practice then please do get in contact with mark.taylor@icaew.com. You can find the previous *Tech Essentials* guides at [icaew.com/techessentials](http://icaew.com/techessentials)



**IT FACULTY PROFESSIONAL DEVELOPMENT**

**WEBINARS**

**POWER QUERY - HOW TO GET STARTED**

**8 September 10:00-11:00**  
Excel Tip of the Week blogger and technical manager at the faculty, David Lyford-Smith, shows you how to get started with Power Query for Excel 2013, by creating an automated Twitter analytics report.

**FINANCIAL MODELLING**

**16 October 10:00-11:00**  
Liam Bastick returns to provide another master class in financial modelling.

**STATISTICS SKILLS IN EXCEL - WATERFALL GRAPHS**

**28 November 12:30-12:50**  
We go back to basics for this series of Excel statistics webinars offering you very practical steps on how to make the most of Excel functions and incorporate basic stats tools to improve your reporting efficiency.

Further details and online booking can be found at [icaew.com/itfacevents2018](http://icaew.com/itfacevents2018)

**WEBINAR ARCHIVES**

Don't forget you can access the recordings of our previous webinars via our webinar archives. Topics include: Problem solving in Excel; Cyber protection of the supply chain; Excel Tip of the Week Live; 10 steps to cyber security for smaller firms; PivotTables - simple effective and interactive; and Password management good practice.

[icaew.com/excelwebinars](http://icaew.com/excelwebinars)  
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## FACEBOOK NO LONGER PRESERVE OF THE YOUNG

The dominance of Facebook as the social channel for younger people may well be over, according to research published by the Pew Research Center. The study centred on the US, which is considered to be Facebook's heartland. Its 2.2 billion monthly users include 240 million from the US.

India is the only country with more users, at 270 million, but this is against population figures of 325 million and 1.32 billion respectively.

However, Pew's research shows that Facebook is lagging behind competitors when it comes to usage by teenagers in the US. More than half of young Americans aged 13 to 17 used Facebook (51%), while Snapchat (69%),

Instagram (72%) and YouTube (85%) saw more use. Additionally, when the same cohort was asked which they used most often, Snapchat (35%) ranked number one, followed by YouTube (32%) and Instagram (15%). Only 10% said they used Facebook the most.

In a 2014/15 study, the Pew Research Center found that 71% of American teens used Facebook. Though the data from the two studies is not entirely comparable, the drop-off in Facebook use is still visible and remarkable.

You can read the full report, which offers detailed information on the social breakdown of users and on teens' attitudes towards social media, at [tinyurl.com/CH-PewRes1](http://tinyurl.com/CH-PewRes1)



## SCALE OF 'BIG BROTHER' SURVEILLANCE USED BY CONNECTED APPLIANCES IS REVEALED

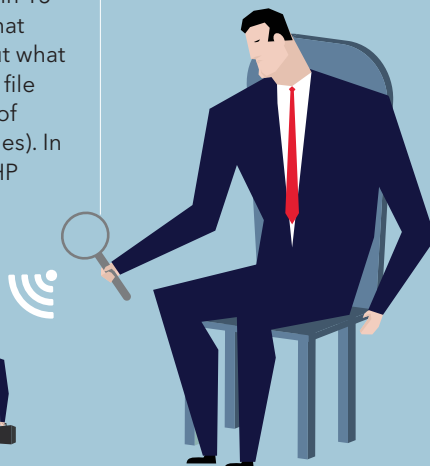
The investigation team at *Which?* looked into smart, internet-connected devices, finding that they could reveal a mass of information about people's lives. The research focuses on home appliances, but many of us use devices aimed at home users in the office too - or, indeed, our home offices.

Researchers set up 19 devices, including a smart TV that was found to be connected with 700 distinct internet addresses in 15 minutes and a HP printer that collected information about what was being printed (such as file size and type, the number of pages printed and file names). In response to the research, HP said it collected this information to help it provide product support,

including its Instant Ink service.

Additionally, researchers tested the ieGeek 1080p IP Camera, which is internet connected. They found a security problem, which allowed them to access more than 200,000 passwords and device IDs for other ieGeek cameras, viewing live video feeds and talking to users through camera microphones.

Read more at [tinyurl.com/CH-Surveil1](http://tinyurl.com/CH-Surveil1)



By Sandra Vogel  
Freelance IT writer  
[sandra@vogel.com](mailto:sandra@vogel.com)



## KOREAN BANKS TO LAUNCH BLOCKCHAIN ID VERIFICATION PROGRAM

New blockchain-based identity verification technology has been introduced to banks in South Korea in an attempt to streamline online and mobile banking.

The Korean Federation of Banks (KFB), which represents major commercial banks in the country, announced that the new technology - BankSign - would launch in July.

According to the *Korea JoongAng Daily*, it is hoped that BankSign would bring a much-needed revamp of the current verification system, which has been used by banks for two decades, and has become notorious for its complexity and inconvenience.

The technology is built on Nexledger, a private blockchain system that was created by Samsung's enterprise solution arm, Samsung SDS, and will be available for both online and mobile banking.

BankSign started testing in April, giving employees of selected banks a chance to try it out.



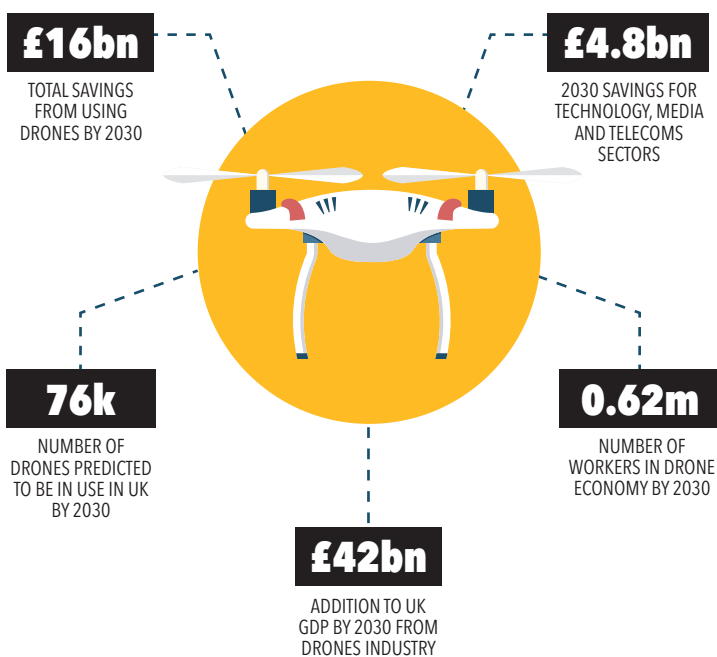
## £42BN CONTRIBUTION TO UK GDP BY 2030 FROM DRONES

A new report from PwC has said that drones could add £42bn to the UK GDP by 2030 – an addition of 2%. The total figure has been analysed by sector, with the greatest addition to GDP – £11.4bn – being seen to come from the public sector, defence, health, education and other services. ‘Other services’, as defined in the SIC code manual, include repair of goods; activities of NGOs, charities, trade unions and political bodies; as well as areas including funeral services, hairdressing and physical wellbeing.

As well as forecasting how

drones will add to the economy, the report also found that they will generate savings to the economy to the tune of up to £16bn by 2030. The technology, media and telecoms sectors seem set to reap the greatest savings of £4.8bn.

The report estimates that there will be more than 76,000 drones in the UK by 2030. This will create jobs in a range of areas, including developing, building, operating and regulating drones. PwC predicts there will be 620,000 people working in the ‘drone economy’ by 2030. Learn more at [tinyurl.com/CH-PwCDrones](http://tinyurl.com/CH-PwCDrones)



THE SKY'S THE LIMIT		
Sector	Potential GDP increase	Percentage impact
Agriculture, mining, gas and electricity	£1.1bn	1.1%
Construction and manufacturing	£8.6bn	1.6%
Wholesale, retail trade, accommodation and food services	£7.7bn	2.5%
Transport and logistics	£1.2bn	1.5%
Technology, media and telecoms	£1.2bn	2.1%
Finance, insurance, professional services and administrative services	£10.4bn	1.6%
Public sector, defence, health, education, and other services	£11.4bn	2.3%



## INTEL EXTENDS BATTERY LIFE WITH NEW SCREEN TECHNOLOGY

Intel has unveiled new technology that could dramatically improve the

battery life of mobile devices. At June's Computex show in Taipei, the company demonstrated a laptop running on its new Intel low power display technology.

Screens are notoriously hungry users of battery life on equipment like laptops, tablets and phones. With Intel's new technology, a laptop screen can run on 1W (one watt), halving its power consumption and extending battery life considerably. At the show, Greg Bryant, senior vice president and general manager at Intel, suggested battery life could be up to 28 hours on some devices, and there was also a demonstration of a high-end laptop lasting for 25 hours.

However, there is no information on when this technology might make it into the world. To learn more, you can watch at [tinyurl.com/CH-IntelBat](http://tinyurl.com/CH-IntelBat) (the relevant part is 17 minutes in).

## TOP 50 ANDROID SHOPPING APPS ARE FULL OF HOLES

More than eight in 10 of the top 50 Android shopping apps in the US have more than three high-level vulnerabilities, according to a new report.

The research, a collaborative effort between Appknox and Seworks, both specialists in mobile app security, put the apps under rigorous security testing.

As part of the drive to encourage app publishers to pay more attention to security, the aim of the research was to broaden awareness of the fact that popular apps could be riddled with security issues.

The top 50 Android shopping apps were tested across 34 different metrics. All were found to have security risks, and a total of 274 vulnerabilities were found overall.

More than five vulnerabilities were found in 23 apps, while 26 had between three and five vulnerabilities, leaving just one app with fewer than three vulnerabilities and none that were vulnerability-free.

The full report, detailing the tests and research findings, is available for free from [tinyurl.com/CH-AppSecurity](http://tinyurl.com/CH-AppSecurity)





JESSICA PILLOW

Frequently, I write about using IT systems to make the management of my practice easier. One area of our practice that I've never written about, however, is our practice's charitable giving, which is also fully systemised.

At Pillow May, our general giving target is 1% of turnover. We use systems to ensure that we achieve this target each year. Every time we submit a set of accounts for a client to Companies House, we donate 1% of the accounts service package fees. Each month, we count up the number of personal tax returns submitted and donate 1% of the basic tax return fee. This leaves us a small amount of unallocated giving target for sponsors, clients and contacts (eg, for London Marathon) or for other local one-off charitable donations.

Pillow May are members of B1G1, which is a giving initiative that allows businesses to give easily to high-impact projects run by carefully vetted charity organisations (part of the Worthy Cause programme) they partner with. Interestingly, B1G1's Giving Board reject nine out of every 10 of the projects that apply. We pay a membership fee that covers the administration of the initiative and then 100% of our charitable giving goes directly to the Worthy Causes.

Through our membership of B1G1, we get access to their great giving systems as follows:

Once my team members have worked out the size of the donation, as explained above, they log into the B1G1 website and choose a worthy cause to match clients' interests or business activities. The more personal the selection of a worthy cause, the more our clients appreciate it! The financial donation is then translated into giving impacts such as:

- 20 days of access to education to prevent girls from being trafficked;
- 2,000 days of access to life-saving,

## GIVING BACK

Charity may begin at home, but it can also begin within IT systems

**Our general giving target is 1% of turnover. Every time we submit a set of accounts for a client to Companies House, we donate 1% of the accounts service package fees**

- clean water to families in Cambodia;
- 500 days of access to a bicycle to get to school;
- 12 trees to support reforestation in places such as Borneo.

We then send out to our client a gratitude certificate, thanking them for making a difference by being a client of Pillow May and explaining the giving impact that we've made, and including a picture of the project. These certificates can either be sent by post or email.

Once our giving is done, the B1G1 widget on our website is updated to show the new giving impact that we've just made. The widget also shows our total giving impacts to date since becoming members of B1G1. An automatic tweet is sent out showing our impact too.

Following that, we then receive an automatic email with an invoice attached from B1G1 ready to be emailed directly into our receipt processing software. The giving amount is taken directly from our PayPal company account so payment is quick and easy too.

The impact communication via the widget, tweets and client gratitude certificates mean that we get a commercial benefit from our giving too.

To celebrate our 10th birthday in June 2019, Pillow May has made a pledge to keep one girl in school for 10 years in Cambodia, which will protect her from sex trafficking. B1G1 provide us with an easy goal tracker, enabling us to see how far towards our pledge we have gotten throughout the year. If you'd like to try out B1G1 systems and contribute towards Pillow May's target, then do so by visiting our campaign page at [tinyurl.com/CH-GivingBack](http://tinyurl.com/CH-GivingBack) (also provided by B1G1). ●

**Jessica Pillow, managing director,  
Pillow May chartered accountants**



MIKE WHITTEN

Our access to vast volumes of data - and the powerful software and hardware to analyse it - has opened the floodgates to a deluge of insights into our corporate and personal lives not available previously. In doing so, it has exaggerated the challenge of knowing how to assess the value of each fleeting perspective afforded to us.

But this challenge is not new. Teachers, the media, friends and colleagues have long presented us with eye-catching statistics that seem superficially plausible. We invest countless hours in our professional lives producing metrics that elicit questions from astute reviewers as to the source of the information, the nature of the population that it came from, the way a question was posed or the method used to select a sample. This raises the risk of measurement and presentation errors, validation and other biases and a raft of opportunities to misunderstand or misinterpret.

Perhaps the sense of scepticism prominent in auditors and other professionals causes us to question and distrust metrics more than most. But in this world of information overload, savvy consumers of data know better than to take what they see at face value.

Armed with this awareness, we can begin to improve the quality and value of the information we provide - and challenge the information we consume.

#### FROM DATA TO INFORMATION

Let's remind ourselves as to the distinction between data and information. Data is the facts and figures, which, when processed and organised, becomes information.

There are a staggering array of tools to create information from data, such as off-the-shelf analytics applications like Microsoft's Power BI, custom-made audit solutions such as Inflo or even trusty

## DROWNING IN DATA

It takes dedicated professionals - not sparkly presentations - to find the real insights in an ocean of information

spreadsheets and presentation tools like PowerPoint.

We can improve the credibility of our own analyses by pre-empting the sceptics' questions. A narrative can attest the provenance of the information being conveyed. Appropriate measures and complementary metrics can broaden the perspective in much the same way that a profit and loss account enriches a balance sheet.

Appropriate visualisations convey results with impact. For example, a line chart may best depict a trend analysis over time; a bar chart helps compare the relative sizes of a population's different components; and a pie chart will show how segments of a population add up to the whole. Carefully selected visualisation types make the difference between thought-provoking insights and meaningless noise.

During my years building analytics software, a colleague introduced me to his 10-second test. Put simply, can a new reader interpret and benefit from information within 10 seconds of looking at it? Any more time than that and its impact is lost. This is good advice for

those with more flamboyant visualisation tools that may put form over function and yield very little informational value.

#### ENRICHED INTERPRETATION

Data analytics are the tip of the investigatory iceberg and they share a common characteristic. Whether it's simple ratios, more sophisticated computer-assisted auditing techniques or mind-bending multivariate analyses, they all require context to be properly understood. Once this information is at our fingertips, we can start the conversations needed to explore and evaluate it. The true value of the information is only fully realised by the experts who understand the broad domain from which the data originated. And they can combine this with their own knowledge and experience to enrich, assure, advise and act on the inferences being drawn.

With powerful tools at our disposal, it's becoming increasingly easy to identify seemingly correlated trends in what we know are disconnected data populations and infer a causality between them that is nothing more than coincidence. A personal project of Tyler Vigen, a Harvard Law School graduate, serves as a cautionary tale. He highlighted spurious correlations between measures such as swimming pool drownings versus Nicholas Cage films released. The measures are obviously disconnected, but demonstrate the danger of over-enthusiastic trend analyses.

Our job as trusted advisers in our fields is to remain ever-vigilant, to challenge the information presented by asking the questions that deliver insight - and maximise the value from our data. ●

**Mike Whitten, delivery programme manager at 10X Banking**



## LEADERS IN THE DIGITAL SPACE

As **Paul Aplin** becomes ICAEW president he sets out his priorities - and why digital is crucial

We have a new vocabulary: artificial intelligence (AI), blockchain, cyber security, data analytics. This is the language of accountancy, business, finance and tax in the 21st century. Digital technology is already changing the way we audit; AI is impacting on businesses at all levels, from micros to multinationals. The pace and scale of change is closer to revolution than evolution. ICAEW and our members are - and must remain - leaders, not followers, in this digital age. The IT Faculty is the focus of all we do in this space.

When I went for my interview at AC Mole & Sons in Taunton back in 1980, I was shown the firm's new computer. It was the size of a fridge and wires ran from it to eight dumb terminals and - via a leased line - to our Castle Cary office, 35 miles away. Formatting accounts was a long-winded process and whether it saved any time is debatable, but the partners back then saw that the future was digital and believed that they either had to be early adopters or forever play catch-up. I subsequently found that the system had an up-front cost of over £40,000 and annual maintenance costs of £14,000. That was a very impressive statement of faith in technology.

### **AHEAD OF THE GAME**

That belief in staying at the cutting edge led to us filing the UK's first electronic self-assessment tax return in 1997 and piloting just about every new digital development in tax administration since. When I look back on the effect technology has had on the firm in the 38 years I have been with it, some clear points

emerge. First, you have to accept that there will always be problems if you are an early adopter, but as technology is constantly evolving, early adoption is better than waiting for perfection in something that may soon become obsolete. Second, time invested in training clients to use technology is time well spent. Third, technology enables you to up-skill: the more my firm has invested in technology, the more people we have employed and the more we have invested in training and skills. Fourth, cyber security is an issue that everyone in the firm has to understand.

While Making Tax Digital (MTD) may be the catalyst for many small businesses adopting accounting software and apps, the market is changing at such a pace that increasing numbers now see a business case for going digital independent of MTD. That of course is how it should be: tax information should be a by-product of digital records, not the driver - as ICAEW has said from the outset.

### POWER OF THE CLOUD

Cloud-based software enables us to offer services we simply couldn't deliver otherwise. Take the small business client who brings in a carrier bag of records in January. The set of accounts we prepare creates a picture of what happened many months earlier. The client's only real interest is in establishing the tax bill and filing the tax return. The service is reactive. If, however, the client can be migrated to cloud-based software, perhaps linked to a feed from the business bank account, we can virtually look over their shoulder and offer advice real-time, even at the most basic level of "you need to send some bills out to avoid a cash flow problem". That is a proactive, technology-enabled virtual-FD service. It's easy to see which the client would prefer.

While cloud-based software and apps are changing the service small practices can offer, digital technology is changing what we do at all levels of the profession.

For decades audits have depended on sample selection, testing and extrapolation of results to assess the integrity of figures in financial statements. The processing capacity and speed of modern computers opens up a whole new world of data analytics and enables us to audit vast volumes of transactions. The question then becomes "what shall we test for?" rather than "which transactions shall we test?"

AI is impacting on many areas already and is set to impact on even more. I remember some years ago listening to a programme on BBC Radio 4 about expert systems. I thought expert systems would put me (as a tax adviser) out of business within a decade. They didn't, but I believe that AI will have a much greater impact on advisory work over the next few years - and I put special emphasis on the word "few" because the pace of change is rapid. I do not believe that AI will put us all out of business, but I do believe that it will change the way we do business.

The IT Faculty-led joint project between the Shanghai National Accounting Institute and ICAEW on big data in Chinese businesses looked at the way business models could be adapted when the power of technology is harnessed. I left the report's launch event



in January fascinated and enthused in equal measure and I am delighted that the project is continuing.

### HANDS ON

While the IT Faculty is ICAEW's centre of excellence and thought leadership on digital, other parts of ICAEW are also heavily committed to embracing the power of technology. The IT Faculty, for example, has worked closely with the Tax Faculty on MTD and on a project looking at the way other countries have used technology to improve tax administration. The resulting report published in 2016, *Digitalisation of tax - International Perspectives*, contains some fascinating insights and I am delighted that the report is currently being updated.

Elsewhere, ICAEW has worked in partnership with Enterprise Nation to provide a digital platform through which the UK's small business community can access advice from ICAEW members.

The ICAEW Practice Committee has launched a new project, 'Tomorrow's Digital Practice', to help practitioners offer digital services to clients. More initiatives will follow over the course of the year.

Throughout my career I have taken a keen hands-on interest in the potential digital technology holds for our profession. In my year as ICAEW president, I look forward to seeing ICAEW and our members leading the way in the digital transformation of business at every level, wherever in the world we operate. ●

**Paul Aplin, ICAEW president  
and a partner at AC Mole & Sons**

# WHAT'S THE DEAL?

Keeping up with Making Tax Digital can be difficult. Here, **Caroline Miskin** guides members on the latest updates and what you should do to prepare



When it comes to Making Tax Digital (MTD), there is a lot going on, making it difficult to keep up with developments. Whether it's pilots or reprioritisation HMRC projects, members need to keep abreast of the latest updates on MTD. Here we break down what's going on for MTD for business and MTD for individuals (MTDi), and how you can prepare.

## THE PILOTS

The pilot for MTD for income tax moved to public beta on 15 March 2018. It is restricted to those who have a single self-employment and/or income from property (excluding furnished holiday lettings). Currently, only four software products are listed on GOV.UK: Absolute, Forbes, Iris and Rhino.

We understand that about 20 software developers are involved in the MTD for income tax pilot and more products should be added to the list as the pilot progresses.

However, some providers may wait until the full suite of APIs has been released by HMRC and others may wait until we have a date for MTD for income tax becoming mandatory. The start date for mandation requires a decision by the government but will not be before April 2020.

Meanwhile, the pilot for MTD for VAT started on 11 April 2018, with a small number of invited businesses meeting a strict set of criteria and about six software providers (of around 130 who have expressed an interest). This pilot is expected to move from controlled go live to public beta later in the summer and it is only then that HMRC can publish a list of available software.

The major concern is the limited amount of time between the pilot moving into public beta and the start of mandation in April 2019, particularly for those who are waiting to be able to assess the software market before choosing a product. We do expect products that

enable the use of spreadsheets to be available; there are informal indications from some software companies, like BTC and Taxcalc, that they are likely to develop such products and some of the Big Four accounting firms have also expressed interest. The MTD for VAT notice will be published shortly and will complete the legislative framework for MTD for VAT.

## MTDi AND HMRC REPRIORITISATION

On 30 April 2018, HMRC revealed the outcome of its reprioritisation of its current projects (conducted to ensure capacity for Brexit-related priority projects). The main impact is on MTDi and the projects postponed include further development of the personal tax account, dynamic PAYE tax codes, moving further groups of taxpayers from self assessment to simple assessment and pre-population of information such as interest and dividends (beyond work already in progress). The postponement of MTDi has been misinterpreted by some as meaning that MTD for income tax has been postponed, which is not the case; the government took the opportunity to confirm the timetable for MTD for business as announced on 13 July 2017.

## HOW SHOULD YOU PREPARE?

The priority should be those clients and businesses that will be within scope for MTD for VAT starting from April 2019. Those already using accounting software should speak to their software provider to confirm whether the product will be upgraded to include MTD functionality and when. Those businesses that are not using accounting software or which will need to use spreadsheets alone or in combination with software may wish to wait until there is a range of products to choose from.

UK-based agents can prepare by setting up their agent services account, while overseas agents will be able to set up their account later this year. Certain MTD for VAT transactions will have to be completed by businesses themselves by accessing their business tax account (unless a digital exclusion exemption applies). Businesses should check that they have access to their business tax account and agents may wish to prompt their clients. ●



**Caroline Miskin**, technical manager with responsibility for practitioner tax matters, Tax Faculty

# STRONG ROOM

There is a new safe space online where members can discuss digital security concerns in the accounting profession. Nina Bryant reports on how the new ICAEW group within the Cyber Security Information Sharing Partnership works

There was a double celebration for the IT Faculty at the London headquarters of the National Cyber Security Centre. As well as hosting the launch of the fifth-anniversary edition of *Audit Insights: Cyber security*, the GCHQ offshoot welcomed ICAEW as a new participant in CiSP - the Cyber Security Information Sharing Partnership.

## SECURE COMMUNITY

Since being established in 2013, the free-to-access CiSP secure community has acquired 9,000 members from 3,000 organisations involved in delivering information security to other UK-based organisations. The new ICAEW private group within the community gives ACA-trained accountants a safe space in which to discuss their cyber concerns.

Richard Anning, head of the faculty, gave the opening address, introducing

## RESOURCES

Find out more about the private ICAEW group within CiSP by applying on [ncsc.gov.uk/cisp](http://ncsc.gov.uk/cisp)

The ICAEW sponsor is technical manager Mark Taylor - email [mark.taylor@icaew.com](mailto:mark.taylor@icaew.com) More details at [icaew.com/cisp](http://icaew.com/cisp)

*The cyber threat to UK business 2017-2018 report*  
[ncsc.gov.uk/cyberthreat](http://ncsc.gov.uk/cyberthreat)

*NCSC Small Business Guide*  
[ncsc.gov.uk/smallbusiness](http://ncsc.gov.uk/smallbusiness)

*Audit insights: cyber security*  
[icaew.com/auditinsights](http://icaew.com/auditinsights)

speakers including former faculty chairman George Quigley; Jeremy Gardner, managing partner at Roffe Swayne; and the team from NCSC.

Sarah Lyons, NCSC deputy director for economy and community engagement, said the trust placed in accountancy was essential to the success of the profession in practice and business, but that the information held by accountants made them a lucrative target. She outlined the four aims of CiSP: reduce risk, respond, support the UK economy and society, and grow cyber resilience.

The NCSC team gave an overview of threats and ran through some of the findings of their joint report with the National Crime Agency, *The cyber threat to UK business 2017-2018*. There was a significant rise during 2017 in hostile cyber attacks, including 34

major incidents. The technical skills and resources required to mount an attack were becoming commoditised, enabling more non-technical people to commit criminal acts.

Gardner said that for CiSP groups to work effectively, a spirit of trust around information sharing needed to prevail. He added: "Access to information seems limited by our own secrecy." A rundown of the relevant legislation enacted both in Europe and the US showed the world leaning more towards mandatory reporting of breaches, making the need for knowledge sharing more acute.

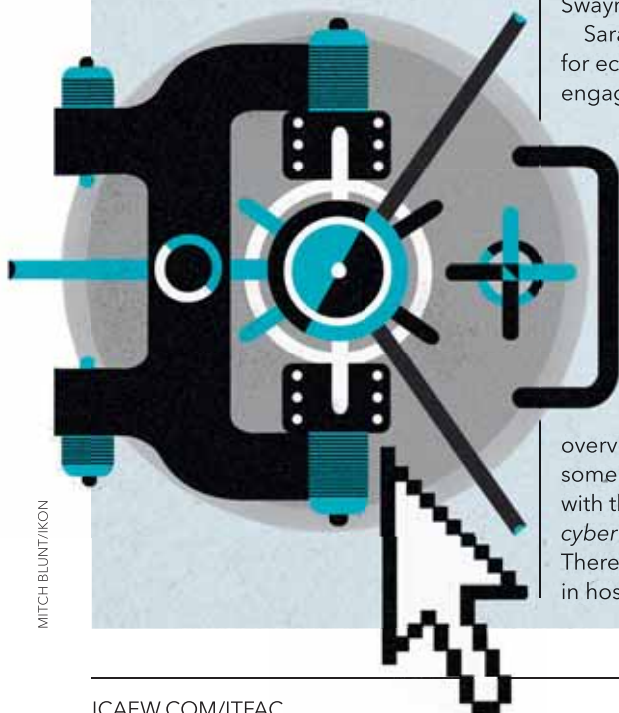
## HALTING HACKERS

Gardner outlined how sharing had already helped using the example of the WannaCry virus, and the fact that the hacker who was credited with halting its spread had used information originally shared via CiSP. The CiSP community saw a rise in traffic, with 23,000 hits as a result of WannaCry.

Lucy T said she hoped the ICAEW CiSP community would grow rapidly, and explained how it would work. The system is locked down with no external social media links, helping to ensure it remains secure and confidential. As well as individual groups remaining private, the entire system is member-only. Information is shared according to a traffic light protocol, which governs how information shared on CiSP can be used. Posts can be restricted to particular groups, and also created anonymously. Participants remain in control of who sees their data. Notification alerts can be arranged so that members never miss a relevant post.

Quigley welcomed ICAEW's introduction to CiSP, and asked why the profession wasn't sharing. He gave the example of retail, which had created successful information sharing protocols (using the telephone) in the 1980s to prevent organised gangs committing theft. "If it's happening to one of us, then we all need to know."

He added that *Audit Insights* had been created in a spirit of sharing, but that the profession had not really improved upon that over the five years since. But he said: "If we know what attackers are doing we can change what we do. We will all be in a better place."●



# FUTURE READY

How has the ACA shaped your career and development? What do tomorrow's accountants need from their training in light of technological change? We convened a virtual roundtable with members to find out

In the past few issues of *Chartech*, the IT Faculty has discussed the broad future needs of the profession - specifically in light of the well-reported fact that automation is affecting accounting with the elimination of the most menial and entry-level tasks.

But in our articles so far, we haven't really examined ourselves as ACAs. What has the qualification given us that has prepared us well for our roles? And what can we do to prepare those who are to walk in our footsteps? Our virtual roundtable convened four IT Faculty members to hear their views.

## THE SKILLS WE USE OR LOSE

Mark Taylor kicked off the session by asking what parts of the ACA members were still using frequently. Answers depended a lot on the career course participants had taken.

Nic Granger said her ability to understand technical information quickly and give advice had been informed by "the stuff that you do towards the end of your qualification, the case studies". However, she'd found the specifics of the ACA had lessened in importance: for example when she worked for the Falkland Islands government setting tax policy. "I used the principles of tax, but it was a different tax regime. The detailed technical knowledge that I learned was irrelevant."

Carys Davies added that she'd benefited from being able to understand different kinds of business in various sectors as a result of the ACA, working out quickly where she could add value. "I work with a lot of finance teams as well as operational teams, so it's quite good for me to have that financial knowledge and to be able to understand what they are talking about."

Amar Thakrar found that financial management skills have helped him the

most, "even though I've ended up in tax". He added: "This helped me become slightly more commercial and make broader business decisions." Audit had been less useful to Amar, but crucial for Davies, though her roles to date had not required her to use her knowledge of tax or law. Simon Keeling said that he had probably used all areas of the syllabus at some point, but particularly what he learned on the business law, tax and valuations modules.

## SKILLS FOR THE NEXT GENERATION

Taylor asked the group what today's students would most need to be relevant and remain so.

Granger said learning from practical case studies would always be vital, as well as data analytics and soft skills such as communication. She added: "We should continue with double entry - I don't think you can really get anything in accounting without having the basic ability to do T-accounts in your first couple of years."

Keeling thought Excel would remain relevant, while Davies believed that Excel had its place, but many people had become "a bit reliant" on it. "I think there'll be other tools - people are starting to realise Excel isn't reliable for everything. I've seen some clients moving away from Excel for things like financial consolidation."

Thakrar said newcomers will need to be able to work across teams, and across boundaries and geographies. "Having the confidence to do that is where I see people struggle," he added.

And while he believed the ACA was very good for factual content, Thakrar wanted to see new entrants become more broad in their skills base. "How do we have slick processes and how do we cut the manual tasks and be efficient to drive value? This is what the ACA should be teaching on top of



robotic process automation, analytics and so on."

## ELIMINATING TASKS OF OLD

When asked about what would happen to new entrants to the accounting profession once automation had eliminated entry-level tasks, the participants had a refreshing take on the future.

"I'm not convinced that we will have fewer lower level tasks. I think the lower level tasks will change," Granger said. She added that there would be a move towards people analysing data earlier on in their careers. "I think the important thing about those initial years is getting to understand how the technical stuff works in practice."

Thakrar believed this change would allow students to do "more exciting work". He said the amount of money students invested in their higher education meant that they were engaged and interested. "The work will be less mundane and more





**“I think the important thing about those initial years is getting to understand how the technical stuff works in practice”**

Nic Granger, CFO and director of corporate, Oil & Gas Authority

dynamic, and they’ll get to apply judgement. Automation presents them with opportunities – bearing in mind we had to work for three years doing what I’ll call ‘character-building’ exercises, getting bored at the photocopier. This is a good thing.”

Keeling believed audit in particular would be fundamentally altered for future generations of accountants. “Companies will automatically invoice each other and there will be no need for ACA students to tie invoices to underlying records; there will be no possibility for error in a closed system.”

But, harking back to Granger’s point, he said: “There’s always the argument of what happens when the system goes down, so I agree that good old-fashioned double entry is always useful, even if just in your head to describe a scenario.”

He thought auditors would end up with a more interesting role, rather than be eliminated. “Audit time can be spent on improved reporting and challenging management assumptions. Students will instead gain more experience in the areas which we and the industry find more challenging. This will advance the whole profession.”

Davies, in her work with auditors, said she had already seen this starting to happen.

#### THE ADVISORY ROUTE

ICAEW believes accountants will move into the role of trusted adviser. Taylor asked attendees how we can help students achieve this status. Keeling believed increased use of real-life examples in case studies would mean there is “less of a difference between on the job learning and that taught through the syllabus”.

Davies felt that her client-facing role at PwC allowed her to blend all that she had learned so far and provide an advisory service. “I think it’s slightly more difficult in industry.” She added that soft skills were incredibly useful in client situations.

Thakrar said change management was an important factor in business, and so knowledge of that would be advantageous to the future adviser.

#### THE VALUE OF EXPERIENCE

The group was then asked how more mature accountants could be helped to remain relevant. How would they marry their experience with the advanced tech knowledge of their juniors?

Thakrar believed those who wanted access to advanced technology training could get that at work, but it was not “the be all and end all”. He added: “Older members of the profession don’t

#### DIALING IN: OUR ROUNDTABLE PARTICIPANTS

**Nic Granger**, CFO and director of corporate, Oil & Gas Authority

**Carys Davies**, data analytics and assurance manager, PwC

**Amar Thakrar**, head of statutory and tax compliance, GSK

**Simon Keeling**, manager – corporate finance, Crowe Horwarth Australia

**Moderating: Mark Taylor**, technical manager, IT Faculty

necessarily have to be experts in it. They just need to understand how the principles of technology can be applied – where it’s beneficial and in which scenarios it isn’t, how much it will cost and so on.”

Keeling said practices and finance teams needed to find a way to instil trust in the capability of the younger members’ skills in technology, and give older members knowledge about what it can achieve.

Granger extended this point to the perception of knowledge. “I think people need to be less afraid to admit that they don’t need to know everything; it’s a good thing that in your team someone at the start of their career might know more about a particular topic than the boss does.

“This isn’t about younger people coming through and nipping at your heels; it’s a really good way of making your team that much more diverse and having more skills in the mix.”

Davies added: “This is about seeing the way things have always been done and adapting to change. I think a lot of the time people use their experience and their knowledge to make decisions, but don’t necessarily utilise data to help inform them as much as they could.”

#### THE FACULTY ROLE

Taylor asked the group what they thought of the IT Faculty’s activities around development. They agreed that the team was pro-active, and should continue its work lobbying on technological matters of relevance to the profession, flying the flag for the future good of accountants.

#### AND FINALLY...

When Taylor posed the question, will there be a role for accountants in 10 or 20 years’ time, the group were unanimously positive. Thakrar said: “It won’t be the same, but there’ll definitely be a role.” ●

Preparing for the General Data Protection Regulation (GDPR) has been challenging for accountants, especially in organisations that have high levels of compliance with the Data Protection Act (DPA). GDPR was enacted in the UK as DPA2018 on 25 May, and so it is helpful to see it as an enhanced version of the DPA.

"Modernising the law around data protection was vital; it needed bringing up-to-date. But the implementation of GDPR has been more difficult than it needed to be," says Stephen Farra of Hornchurch-based accountancy firm Stephen Farra Associates.

Farra would have welcomed more GDPR guidance from the Information Commissioner's Office (ICO) earlier than it became available and with more detail on some areas. He is not alone. "The ICO released guidance on its

## NEW NORMAL

GDPR projects have consumed precious resources, but as Lesley Meall found, they have also given accountants an opportunity to make their organisations more efficient

website that was fairly general, continually, but there wasn't enough on the specifics," says Andrew Moyser, a partner at MHA MacIntyre Hudson and its data protection officer, who led on GDPR. "There has been a lack of clarity across the country on GDPR and what it means for some activities," he says, giving marketing as an example.

We have all felt the knock-on effects in the deluge of emails on GDPR, with a wide range of requests and declarations on 'consent' and opting 'in' or 'out'. Many of these emails were confusing, incorrect or both.

A lack of specific and practical guidance for some industries and professions also troubled accountants, as well as their customers and suppliers. Farra and Moyser were held back by the speed at which others were (or weren't) GDPR-ready; information from software providers and specific



guidance for accountants was not available early enough.

A degree of uncertainty is not unusual with a significant change to law and regulation; accepted practice on some aspects of GDPR will emerge over time and as legal precedents are set. Nonetheless, because some of the most detailed and industry-specific information and guidance on GDPR emerged very close to (or after) the 25 May deadline – and businesses needed to progress their GDPR projects well in advance of this – some GDPR-related work had to be repeated or revised. “This was a key frustration,” says Moyser.

### SILVER LININGS

Achieving and then maintaining the ‘new normal’ of GDPR may be proving costly, complex and time-consuming for accountants and the organisations they work with and for, but there is an upside and it goes beyond compliance. Emphasis on ‘data protection by design and by default’ requires businesses to consider their policies and practices around data retention, accessibility, security, storage, destruction, the content and frequency of staff training and a great deal more, and doing this can potentially deliver some real business benefits.

Because GDPR touches many areas of the business, it provides opportunities to improve them by making them more agile, more efficient and more secure. “Preparing for GDPR has given us a far greater awareness of what’s going on across the firm and where our weaknesses are,” says Moyser. This has been used to change aspects of how the business operates where appropriate. “We have improved our basic systems and structure and gained clarity – from the company’s perspective – in many areas,” says Moyser.

When the firm conducted its pre-GDPR data mapping exercise, this highlighted some inefficient manual processes that it had not been aware of. For example, hard copy duplicates of invoices sent to clients were still being printed and stored, years after an electronic system had rendered this unnecessary. “Somebody seems to have forgotten to tell our credit controllers, so somebody in credit control was still doing something they had always done, when there was no longer any need for it,” says Moyser.

## Because GDPR touches many areas of the business, it provides opportunities to improve them by making them more agile, more efficient and more secure

### BUSINESS BENEFITS

1. Stronger cyber security;
2. Improved data privacy and security;
3. More accurate, efficient and cost-effective data management;
4. Better alignment with evolving technologies;
5. Greater organisational insights;
6. Increased productivity;
7. More informed decision-making;
8. Better risk management and mitigation;
9. Improved marketing return on investment; and
10. Stronger supply chains.



“Forget GDPR. It was just a waste of paper and of space.”

Another area where GDPR preparations highlighted room for improvement is contract management. All contracts needed to be reviewed, but with a history of acquisitions, 12 offices and many service lines, this was a massive undertaking. “After a risk assessment I began by reviewing high risk contracts for GDPR compliance,” says Moyser, who also started building a contracts register. Eventually, all contracts will be in the database, which will be regularly updated. “This good practice is useful for more than just GDPR,” he says.

### GOOD PRACTICE

GDPR preparations also helped accountants to identify and apply more good practices to technologies that have been reshaping business practices since the DPA was introduced. For example, increased use of cloud resources where market forces have shifted control away from traditional IT departments. “Things had moved so quickly that sometimes we were outside the loop on how many apps people were experimenting with and using,” says Moyser. Now, such use is accompanied by appropriate security procedures and they are more strictly enforced. As is the firm’s long-standing ‘tidy desk’ policy. “Although we may have sometimes become relaxed about this policy in the past, we are clamping down and trying to enforce it as much as we can,” says Moyser. People have been reminded why policies such as this are so important.

He says: “I think privacy by design and by default is something an accountant always has at the back of their mind, but now it’s front and centre.” Also front and centre are aspects of GDPR where accountants still lack clarity on some of the specifics.

For example, the issue of when accountants are data controllers and when they are data processors, a matter of contention under the DPA, remains unresolved. Other areas of uncertainty include: how long to retain data associated with specific services; when and how best to display or distribute privacy notices; and which lawful basis for processing to use.

The implementation of GDPR is not without its challenges. ●

# THE POWER QUERY REVOLUTION

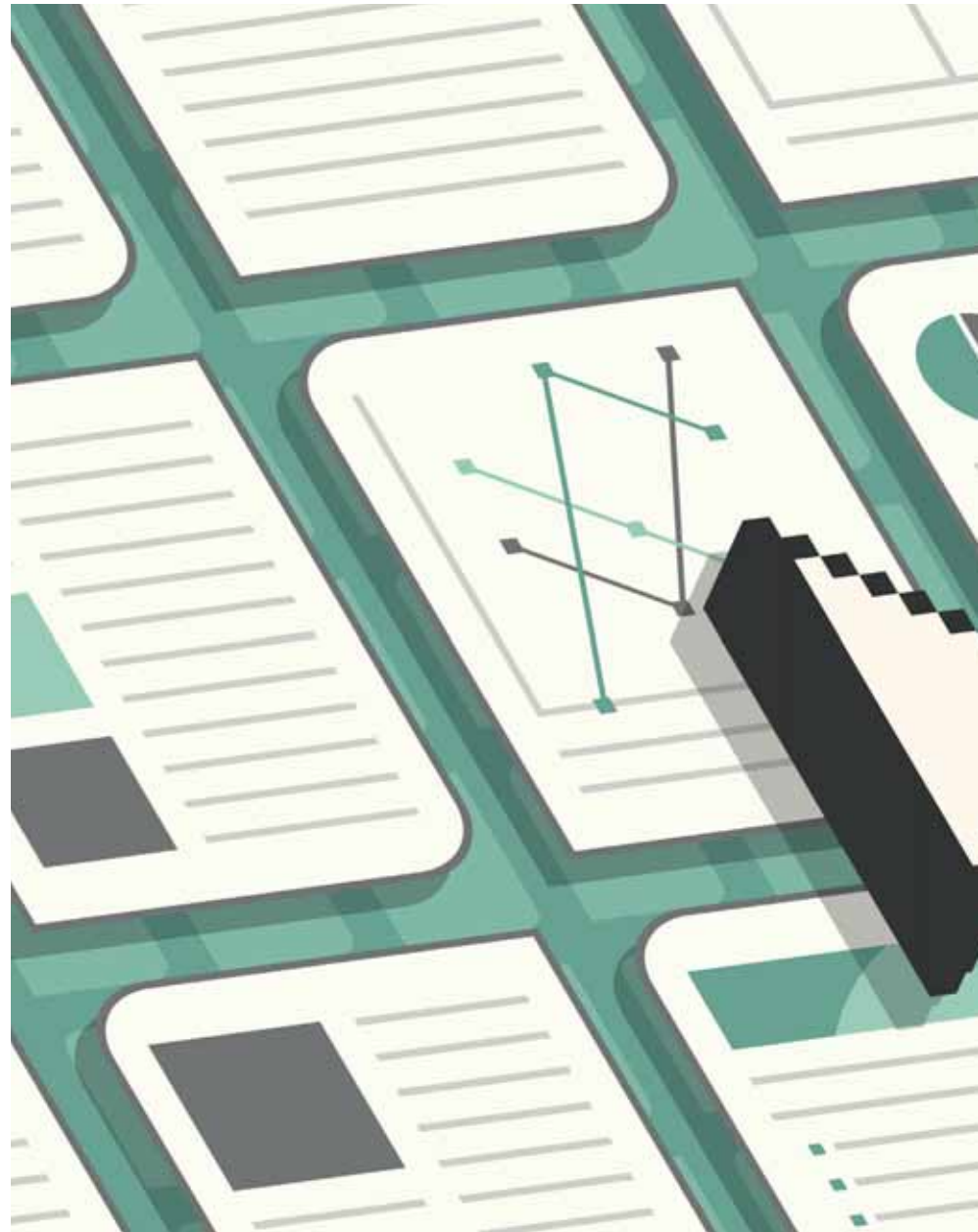
Power Query changes everything you think you know about Excel – and that includes training, argues Simon Hurst

Focused training on spreadsheet use can be particularly advantageous for those working in finance. Not only is spreadsheet use so prevalent within the industry, but the consequences of inefficiency and errors can be expensive in monetary and career terms. Just as we recognise that our fundamental ethical principle demands adequate spreadsheet training for staff, so changes in the dominant spreadsheet application, Microsoft Excel, mean that we have to reconsider what that spreadsheet training needs to include. Excel's Power Query fundamentally changes how the vast majority of users need to design spreadsheet models and solutions.

The Power Query feature was introduced as an optional add-in for Excel 2010, but Excel 2016 saw it become an integral part of Excel as the Get & Transform group of the Data Ribbon tab. More recently, for Office 365 subscribers, it has even replaced Excel's existing Get External Data feature, meaning that many users will find themselves using the Power Query query editor without actively deciding to do so.

## UNDERSTANDING DATA IS VITAL

From Cambridge Analytica to GDPR, data has been at the centre of the news agenda for many months. Without the ability to work confidently with data, accountants will miss major opportunities. Of course, accountants have been working with computerised data for decades, but there is a definite divide between using spreadsheets to store and process data, and understanding databases. In my



experience of lecturing on Excel to rooms full of accountants, for every 20 accountants who consider themselves to be proficient at using a spreadsheet, only one will admit to similar proficiency with a database.

One of the all too obvious consequences of this is the frequent use of spreadsheets to perform tasks that would be far better carried out using a database. Often, this results in considerable time being wasted in adapting a spreadsheet to deal with issues that a database could handle natively – data validation would be an example. In addition, a spreadsheet solution to managing data will often lack the built-in integrity that a database would offer and would

thereby significantly increase the likelihood of error.

Before the advent of Power Query, a lack of database expertise might only have been an issue for spreadsheets that were chiefly designed to work with structured data. Power Query means that the ability to understand data is now vital if you are to create the most efficient and reliable solution to a much wider range of spreadsheet issues.

## IMPRISONED IN A CELL

The use of spreadsheets conditions us to think in a certain way. We are restricted to a two-dimensional grid and the idea that a cell can only contain a single element of information. Such a structure is a very inefficient way of



dealing with even quite simple real-world situations. For example, a spreadsheet might be able to hold a simple list of invoices where each invoice only includes a single item. As soon as we have to deal with multiple lines, a simple list can no longer cope. If we include a line for each item, then we end up duplicating a whole set of information, such as the invoice date, the invoice number and even the complete address of the client that we are invoicing. Such duplication is not only inefficient in terms of the extra data entry required, but also threatens the integrity of the data by creating the possibility that a single invoice could have multiple different dates or invoice numbers on different lines.

### ICAEW POWER QUERY RESOURCES

The Excel Community extensively covers the use of Power Query. Enter Power Query in the Blog Search Box to see the articles. In particular, a short series looked at Power Query as an alternative to the use of more standard Excel techniques to create an automated set of management accounts. For a summary on the IT Counts website, see [tinyurl.com/CH-PQ-ManAcc](http://tinyurl.com/CH-PQ-ManAcc)

Another IT Counts article looked specifically at how being able to encapsulate a table of data in a single 'cell' can solve a practical accounting problem at [tinyurl.com/CH-PQ-TableCell](http://tinyurl.com/CH-PQ-TableCell)

On 18 September, David Lyford-Smith will present a webinar, called Power Query, how to start. To book, see [tinyurl.com/CH-PQ-DLSwebinar](http://tinyurl.com/CH-PQ-DLSwebinar)

### OTHER OFFICE TIPS

The Excel Community site has articles on Excel and other office software. There's also a forum ([tinyurl.com/CH-ExcCom](http://tinyurl.com/CH-ExcCom)) to ask and answer questions.

The IT Counts site has more general interest articles and a forum at [tinyurl.com/CH-ITcounts](http://tinyurl.com/CH-ITcounts)

Simon's book, *Essential Excel for Accountants (and others)*, is available as a PDF at [tinyurl.com/CH-EssExc](http://tinyurl.com/CH-EssExc)

For more Excel tips, see Lunchtime Learning section of Simon's website at [tinyurl.com/CH-Lunch](http://tinyurl.com/CH-Lunch)

In fact, there are even issues with simple lists in Excel. To work with items in a grid, we generally need to know the dimensions of the range involved. When the range changes, our references need to change to accommodate the change in dimensions. Excel Tables feature, introduced in Excel 2007, has improved the situation considerably through its ability not only to expand to include data entered into adjacent cells, but also through allowing dependent references to change automatically. However, even the use of Excel Tables is not a complete solution. Imagine we have items in a list we want to summarise according to the entries in one or more of the columns. To do this with formulae, we need to manually include a summary formula for

each of the items. If we add a different item, we would need to add a new formula. PivotTables can help, but often we need the data in a different format than that to which a PivotTable limits us.

### BREAKING THE SHACKLES

Power Query liberates us from many of the limitations of the spreadsheet grid. Originally, it was intended as a way to clean and organise external data to make it usable in Excel. By bringing database capabilities into the heart of Excel, Power Query is able to work dynamically with properly structured data, whether that data be held in a separate database, a CSV file or a Table or range within an Excel workbook. The output of Power Query is an Excel Table in a worksheet, providing similar functionality to creating a table using cell-based formulae, but with the capability of automatic adjustment to incorporate any new data.

Power Query presents data in the familiar row/column grid, but a column is capable of holding not just individual items of data, but entire tables containing multiple rows and columns. So, taking our earlier example of invoices and invoice lines, our list of invoices could include an invoice lines column that included multiple rows within each invoice row. The contents of this column could then be expanded to show the full details for each invoice line without ever having to enter the details of the overall invoice more than once.

Apart from these database features, Power Query can also cope efficiently with a range of practical, everyday issues such as summarising, rounding, dealing with numbers that aren't recognised as numbers, and with dates that aren't recognised as dates.

### CONCLUSION

Because Power Query has the ability to resolve a wide range of Excel issues more efficiently, effectively and reliably than solutions based purely on the Excel grid, failure to understand its capabilities could result in spreadsheets that take longer to create, are more manual in operation, and expose the user to a greater risk of error. Given the latest ICAEW guidance on the necessity of considering the ethical implication of asserting proficiency with Microsoft Excel, Power Query may not be a feature that our professional indemnity insurers would be happy for us to omit from our spreadsheet training regime. ●



LEO WALDOCK

Blackmail can be a tricky business as you need some way of collecting the pay-off, and it is generally accepted that the kidnapers have real difficulty collecting their ransom money without being arrested.

It is a similar story if you come up with a clever piece of malware that can infect a large number of PCs, phones or laptops. You can cause plenty of trouble for the victims without much difficulty, but how, exactly, can you reap a reward? If you're working on an industrial scale, you may be emptying bank accounts or stealing intellectual property, in which case, the reward is fairly obvious.

Then again, if you get your hands on other people's passwords, you won't have much difficulty ordering items on eBay or Amazon and ought to be able to have your 'shopping' delivered to a safe address. After that, you'll have to find a way of converting the illicit iPhones (or whatever swag you've bought) into cold cash. That's a long and involved process that carries a fair degree of risk and what sort of hacker wants to spend their time fencing stolen goods?

#### A NEAT IDEA

Over the past couple of years, we have seen the rise of ransomware - malware that will encrypt the contents of a drive and then charge a ransom for the decryption key. This is a neat idea as you can charge a chunk of bitcoin worth, say, £1,000, which is currently about 0.2 BTC. Once again you will have some work on your hands. First, you have to construct and deliver the malware, and then you have to convince the victim to pay. You will probably have to educate them on how to get their hands on bitcoin and how to make the payment, which will probably dissuade some people from making the transaction. At every step along the way, you just know the victims

## HELD TO RANSOM

Using malware to get money from people can actually be quite difficult

are wondering whether or not they will receive a decryption key that unlocks their drive.

In the past few months, we have seen a rise in malware that cuts out the middle man by mounting a crypto-miner attack (see [tinyurl.com/CH-Crypt1](http://tinyurl.com/CH-Crypt1) and [tinyurl.com/CH-Crypt2](http://tinyurl.com/CH-Crypt2)).

The idea is that once the malware lands on the victim's machine, it begins mining for cryptocurrency. However, the recipient is the black hat rather than the owner of the PC. Cryptocurrency mining is a process of solving maths problems with enormous prime numbers by drawing on

the processing power of the CPU and GPU (graphics) chips. This causes the PC or laptop to work very hard, increasing the power draw at the mains socket and raising the internal temperature of the computer.

The two main factors that determine whether crypto-mining is economic are the cost of the components and the unit cost of electricity. Many legitimate crypto-mining operations are based in Iceland or Scandinavia, where renewable energy is cheap.

Clearly, the cheapest PC components and electricity are those that belong to someone else, as the resulting coin is pure profit.

WinstarNssmMiner is a nasty variant of crypto-miner malware that fights hard to maintain its hold on your PC. If your antivirus software detects it, then it immediately attacks critical Windows files and crashes your PC. However, the process seems quite clear, so we can be confident that security software will eventually learn to cope with this malware.

Crypto-mining on other people's PCs can be legitimate, provided you get the proper permission. I have used at least one news site that detects when AdBlock Plus is installed, and then offers the choice of whitelisting the site or allowing them to use my CPU to mine for about 30 seconds.

That seems like a fair choice to me, as it is the equivalent of dropping a few coppers in the tip jar. By contrast, crypto-mining malware puts your PC to work full time and you are even expected to pay the electricity bill at the end of the month.

As ever, the best advice is to keep your security software up to date and avoid clicking on links that look dubious. ●

Leo Waldock, freelance IT writer

## Can your statutory accounts production tools or templates tick all of these boxes?

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Allocations are automated              | <input type="checkbox"/> Hyperlinks to legislation               | <input type="checkbox"/> Outputs to Word, Excel and PDF          |
| <input type="checkbox"/> Basis of preparation, country specific | <input type="checkbox"/> Hyperlinks to standards                 | <input type="checkbox"/> Page breaks are automated               |
| <input type="checkbox"/> Basis of preparation, reset at anytime | <input type="checkbox"/> Hyperlinks to Trial Balance items       | <input type="checkbox"/> Page format is A4 portrait              |
| <input type="checkbox"/> Basis of preparation, select from list | <input type="checkbox"/> Import Trial Balance(s) from Excel      | <input type="checkbox"/> Page numbering is automated             |
| <input type="checkbox"/> Cash flow, automated or manual         | <input type="checkbox"/> Import your Chart of Accounts           | <input type="checkbox"/> Presentation, choose your colours       |
| <input type="checkbox"/> Cash flow, created in minutes          | <input type="checkbox"/> Import your own sections from Word      | <input type="checkbox"/> Presentation, set your preferred style  |
| <input type="checkbox"/> Cash flow, detailed workings           | <input type="checkbox"/> Integrates with Word and Excel          | <input type="checkbox"/> Presentation, specify your currency     |
| <input type="checkbox"/> Change all options or choices anytime  | <input type="checkbox"/> Intuitive interface and workflow        | <input type="checkbox"/> Preview mode for real time checking     |
| <input type="checkbox"/> Choose your presentation currency      | <input type="checkbox"/> Major events log                        | <input type="checkbox"/> Price includes all training and support |
| <input type="checkbox"/> Consolidations are automated           | <input type="checkbox"/> Manage user rights to specific entities | <input type="checkbox"/> Price per user (not the # of reports)   |
| <input type="checkbox"/> Consolidation, detailed spreadsheet    | <input type="checkbox"/> Manage user rights to specific reports  | <input type="checkbox"/> Primary statements, choice of formats   |
| <input type="checkbox"/> Context sensitive filters              | <input type="checkbox"/> Manage user rights to specific tasks    | <input type="checkbox"/> Primary statements, choice of names     |
| <input type="checkbox"/> Context sensitive help                 | <input type="checkbox"/> Mapping can be automated or manual      | <input type="checkbox"/> Reports can be duplicated with ease     |
| <input type="checkbox"/> Context sensitive links                | <input type="checkbox"/> Multi-point editing capability          | <input type="checkbox"/> Reports can be locked for protection    |
| <input type="checkbox"/> Create and store your preferences      | <input type="checkbox"/> No add-ons, everything is included      | <input type="checkbox"/> Reports can be quickly rolled forward   |
| <input type="checkbox"/> Create your own 'master' formats       | <input type="checkbox"/> No coding needed                        | <input type="checkbox"/> Reports can be saved as 'milestones'    |
| <input type="checkbox"/> Cross checks and validations inbuilt   | <input type="checkbox"/> No extra charges                        | <input type="checkbox"/> Rolled reports retain user settings     |
| <input type="checkbox"/> Data entry options, including:         | <input type="checkbox"/> No implementation needed                | <input type="checkbox"/> Rounding, multiple options available    |
| • Keyboard for manual input                                     | <input type="checkbox"/> No manual mapping necessary             | <input type="checkbox"/> Secure, multiple layers of security     |
| • Import from Word and Excel                                    | <input type="checkbox"/> No 'template driven' limitations        | <input type="checkbox"/> Set and forget your options             |
| • Select from drop down lists                                   | <input type="checkbox"/> Notes, can be edited easily             | <input type="checkbox"/> Set and forget your wording             |
| • Tick or untick 'tick boxes'                                   | <input type="checkbox"/> Notes, choice of number format          | <input type="checkbox"/> Set up entities or divisions in minutes |
| <input type="checkbox"/> Data from all common GL's accepted     | <input type="checkbox"/> Notes, choice of placement              | <input type="checkbox"/> Set up 'special' divisions as needed    |
| <input type="checkbox"/> Disclosures, capture tool inbuilt      | <input type="checkbox"/> Notes, comprehensive and up-to-date     | <input type="checkbox"/> Share read-only access with Auditors    |
| <input type="checkbox"/> Disclosures, support tool inbuilt      | <input type="checkbox"/> Notes, create and store your own        | <input type="checkbox"/> Simple and intuitive navigation         |
| <input type="checkbox"/> Drag and drop to order divisions       | <input type="checkbox"/> Notes, drag and drop to re-order        | <input type="checkbox"/> Simple to access via web browser        |
| <input type="checkbox"/> Drag and drop to order files           | <input type="checkbox"/> Online and telephone support            | <input type="checkbox"/> Standards are constantly updated        |
| <input type="checkbox"/> Drag and drop to order sections        | <input type="checkbox"/> Outputs include:                        | <input type="checkbox"/> Straight forward adjustment process     |
| <input type="checkbox"/> Edit in one place, edits in all places | • Annual and Interim reports                                     | <input type="checkbox"/> Sub-consolidations at the tick of a box |
| <input type="checkbox"/> Edit at any point in the process       | • Detailed audit trails in Excel                                 | <input type="checkbox"/> Switch between two or four columns      |
| <input type="checkbox"/> FX Trial Balance(s) conversion         | • Consolidation spreadsheet                                      | <input type="checkbox"/> Updating is automated and real time     |
| <input type="checkbox"/> FX Trial Balance(s) import             | • iXBRL (UK/IRE) tagged files                                    | <input type="checkbox"/> Use for multiple entities and reports   |
| <input type="checkbox"/> Hyperlinks to Chart of accounts        | • Supporting reports   | <input type="checkbox"/> Warnings displayed automatically        |

## IFRS SYSTEM can!

It ticks all of these boxes (and many more) and it is easy to use.

Before preparing another set of UK GAAP (FRS 101, 102 or 104) or IFRS accounts, take a few minutes to find out how IFRS SYSTEM makes accounts production easier.

visit: [www.ifrssystem.com](http://www.ifrssystem.com) email: [enquiries@ifrssystem.com](mailto:enquiries@ifrssystem.com) call: 020 3287 0102



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