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CAN-DO ATTITUDE
THE BENEFITS OF
CREATING A FLEXIBLE
WORKPLACE FOR ALL

BREXIT PERSPECTIVE
HOW LEAVING THE
UNION COULD AFFECT
CYBER SECURITY

THE MORAL MAZE
TAKING AN ETHICAL
VIEWPOINT WHEN
HANDLING DATA



Redrafting the digital landscape

What key stakeholders think it will take to make a success of the latest MTD timetable





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November/December 2017 Issue 212

14







TIME TO REFLECT

Seven leading lights offer their views on what must be done for MTD to finally become a reality





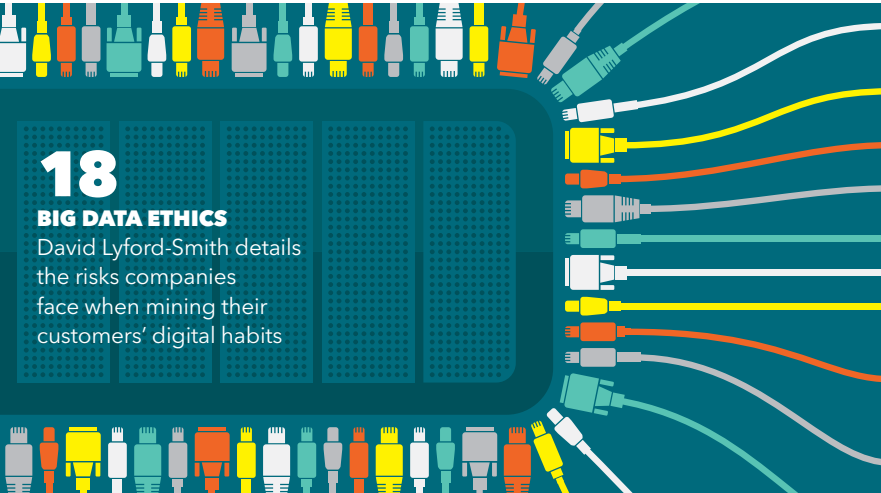




12

DRIVING CHANGE

Kirstin Gillon visits New York to find out how US accountancy firms are embracing digital



18

BIG DATA ETHICS

David Lyford-Smith details the risks companies face when mining their customers' digital habits

11

POST-BREXIT SECURITY



EU-wide cyber security rules may not end with Brexit, explains Alan Calder

04 Editor's letter
Looking back at work undertaken by the faculty over the course of 2017

05 News and events
The latest news from the faculty, plus important dates for your diary

08 Byte size
First anniversary of NCSC; the cities of the future; people's online time revealed; and augmented reality shopping

10 Roaming revelations
Cloud systems can liberate you and your workforce, as Jessica Pillow reveals after a stint living in southern France

20 Excel tips
Simon Hurst continues his exploration of how Power BI Desktop can enhance your data presentations

22 Leo on security
As the iPhone X takes facial recognition to new levels, Leo Waldock muses on the security of such technology

Extending our reach



As we come to the end of another busy year, it is interesting to reflect on some of the many activities we have been involved in - which span much of ICAEW and increasingly much of the globe.

In our Annual Plan for 2017 we listed the two main areas of interest and research as artificial intelligence (AI) and blockchain. We have produced thought leadership reports in each

area (*Artificial intelligence and the future of accountancy* and *Blockchain and the future of accountancy*), which have been well-received and popular topics for discussion at events. Both adopt a similar methodology of looking at the technology, applying it to accountancy and then positioning for the future.

We have also been looking at the impact of big data in Chinese businesses following extensive fieldwork over the summer; this is in partnership with the Shanghai National Accounting Institute and leading Chinese technology company Inspur. The impact of these projects on the work and the profile of the faculty cannot be underestimated - we are delivering our message to an international audience around the globe.

Closer to home we have been working on the practical implications of the General Data Protection Regulation (GDPR) and Making Tax Digital (MTD). As we move ever closer to GDPR D-Day, the calls for help and guidance get ever louder. We convened an MTD Software Advisory Group earlier in the year, consisting of the leading software vendors, practitioners and HMRC; conversations have been invaluable and we are seeing change come from HMRC as a result - yes, spreadsheets are now acceptable!

Our new range of Tech Essentials guides have been written to provide a quick yet comprehensive review of what you need to know in each area. They have proved very popular and we will continue to deliver them next year. If there are areas you think we should be covering, please get in touch.

Next year promises to be as exciting and dynamic as this, as we consider the impact of technology on the profession and our members - in particular AI, blockchain, cyber security and big data. We will continue to provide advice and guidance on those areas that affect members most, including ongoing work on GDPR, MTD and our evergreen topic of Excel.

Thank you for your support this year; we look forward to continuing to provide you with advice and guidance as we move into 2018.

Richard Anning
Head of faculty

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NEWS & EVENTS



MTD DATA SHARING INTEREST GROUP

The Making Tax Digital initiative has provided the opportunity to re-evaluate how crucial data is exchanged between business, accountants and clients. The IT Faculty convened a meeting of six of the largest software developers in late

July at Chartered Accountants' Hall to discuss the issue. The meeting proved that there is a great deal of interest in the idea of creating a technical standard to exchange data between accounting applications.



UPDATING IFAC COUNCIL

Richard Anning, head of the IT Faculty, travelled to Brussels in November to address the International Federation of Accountants (IFAC) Council meeting on the impact of artificial intelligence on accountancy and take part in a panel debate on how technology is changing the profession. He was able to highlight the extensive faculty research and resources in this area. The opportunity arose as a result of Richard's membership of the IFAC Technology Advisory Group.

PRESENTING TECH AT THE STUDENT COUNCIL

Mark Taylor, technical manager at the faculty, presented to the ICAEW Student Council meeting in Birmingham, telling around 30 students about cyber security and the potential impact of automation.

He held discussions with a smaller group of students on their experiences of IT in the workplace. As a result of the day, a member of the Student Council will be joining the IT Faculty Committee.

BIG DATA IN CHINESE BUSINESSES

ICAEW has set up a joint research centre in China on the topic of big data and accounting. The research develops case studies of major Chinese companies and their use of big data in accounting - and broader business - activities. This is in conjunction with its research partners Shanghai National Accounting Institute (SNAI), who train senior finance managers in Chinese companies and Inspur, a partly state-owned technology company.

Following the research phase in China in June, whereby eight companies were interviewed, the report is now complete and was launched in China in the week of 5 November, with Kirstin Gillon and Robert Hodgkinson speaking at a variety of events, including SNAI's annual conference in Shanghai. The report can be found at icaew.com/bigdata

SHOWING SUSSEX UNIVERSITY STUDENTS THE FUTURE OF AUDIT

David Lyford-Smith, technical manager of the IT faculty, was guest lecturer to a class of accounting and audit students at the University of Sussex, where he talked about the changing face of the audit profession and how technology will affect students' careers, outlining present and near-future developments in data analytics, artificial intelligence and blockchain. David's talk ranged over audit and the career structure of audit trainees. Read more at icaew.com/blockchain

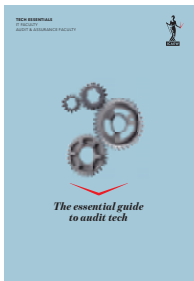




IT FACULTY TOUR OF THE FAR EAST

David Lyford-Smith undertook a tour of South-East Asia for the faculty in November, spending 10 days talking about blockchain, spreadsheet risks, tax digitalisation and skills. The tour visited Malaysia, Singapore and Vietnam and covered audiences of ICAEW members and students, local business leaders and attendees of the premier MIA Conference.

TECH ESSENTIALS: THE ESSENTIAL GUIDE TO AUDIT TECH



In the fifth of our Tech Essentials series this year, the IT Faculty has worked in conjunction with the Audit & Assurance

Faculty to provide *The essential guide to audit tech*.

Authored by the editor of *Audit & Beyond* magazine, Lesley Meall, the guide features interviews with key figures in audit and data analytics, and includes case studies showing how the latest innovation is being used in practice.

The guide is rounded off with an indispensable glossary and further resources so that practitioners can continue finding out more about this exciting area of development in their own time.

The Tech Essentials series has been a hit with readers: the faculty has now covered GDPR, data analytics, blockchain and cyber security, with most now into their second or third reprint.

See icaew.com/techessentials

IT FACULTY PROFESSIONAL DEVELOPMENT

WEBINARS

Risk and opportunities - turning Excel into a competitive advantage

In the business world, Microsoft Excel remains one of the most widely used, most powerful and important software applications of all time. As a program it is pervasive across all industries, particularly in areas such as capital modelling, forecasting, pricing optimisation, risk management and regulatory reporting. This webinar provides senior leaders with the opportunity to learn from experts on how their systematic, business-value-led approach to embracing the benefits of spreadsheets helped control risk, steer them through the challenges of the credit crunch and tackle the subsequent mountain of regulatory reporting.

Speakers: David Lyford-Smith, technical manager, IT Faculty, and Guy Barnes, head of client advisory practice of HTI Labs, Schematiq

Date: 30 November 2017

Charts and graphs in Excel

Veteran Excel trainer John Tennent looks back over his series on charts and graphs in Excel. John will explain every aspect of producing charts and will look at: when and how to use charts; producing complex chart combinations; analysing chart data; and how to present data visually to maximum effect. The webinar will be presented within Excel, showing you exactly where each option lies and how to use it in practice.

Speaker: John Tennent, managing director, Corporate Edge

Date: 07 December 2017

GDPR - your questions answered

During this webinar we will be answering your questions on the implementation of GDPR. If you have any specific questions you'd like us to answer then please email them to itfac@icaew.com so we can include them in the webinar.

Speakers: Jane Berney, manager - ICAEW Business Law and Mark Taylor, technical manager, IT Faculty.

Date: 23 January 2018

Further details and online booking can be found at icaew.com/itfacevents

2018 Webinars

We are continuing to build our event and webinar programme for 2018.

Expected webinars for next year will include:

- Excel Tip of the Week Live #5
- 20 principles for good spreadsheet practice - three years on
- Power Query
- Financial modelling
- Data analytics and Excel
- Cyber security
- Getting ready for GDPR

WEBINAR ARCHIVES

Don't forget you can access the recordings of our previous webinars via our webinar archives. Recent 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.

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54.3-88.3



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The mpg figures quoted are sourced from official EU-regulated test results (EU Directive and Regulation 692/2008), are provided for comparability purposes and may not reflect your actual driving experience.

SEARCH: ALL-NEW FORD FIESTA

CYBER SECURITY CENTRE'S FIRST BIRTHDAY

The National Cyber Security Centre (NCSC) issued an annual review to mark its first year of operation. It reports the centre received 1,131 incident reports in its first year, 590 of which were classed as significant. More than 30 of these were assessed as being serious enough to require a cross-government response process, which the NCSC co-ordinated.

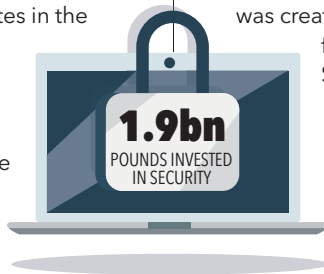
Prominent attacks that the NCSC worked on include the June cyber attack on UK parliamentary email accounts and the Wannacry ransomware attack on the NHS and other organisations in May.

The NCSC participates in the Cyber Security Information Sharing Partnership (CiSP), which provides a confidential and secure environment for the exchange of threat

information. The platform receives over 4,000 visitors a month and members include charities, businesses, academic organisations and parts of the UK's critical national infrastructure. See ncsc.gov.uk/cisp for more on the partnership.

Among the NSCS's other achievements, it launched Active Cyber Defence, which has reduced the average time a UK-hosted phishing site is online from 27 hours to 1 hour, and created a website providing easy-to-understand public advice, which received 100,000 visits in a single month.

The NCSC is part of GCHQ and was created as part of the five-year National Cyber Security Strategy in 2016 with £1.9bn of investment. To download the annual review, see tinyurl.com/CH-NCSC-AR17



CITY LIFE IN 2035

Scenario planning is used by companies to explore plausible future scenarios. Philips Lighting Research has recently published a report based on this technique.

Future of Cities: Scenarios that show how people may experience cities in 2035 takes a broad look at how we might live in, and relate to, cities in the future. The report identifies four different scenarios that may shape the city come 2035.

The Fablab scenario features municipalities that provide basic infrastructure. Under their own initiative, citizens create local and virtual communities allied to innovative local businesses. This leads to citizens who are more attached to global communities than where they live.

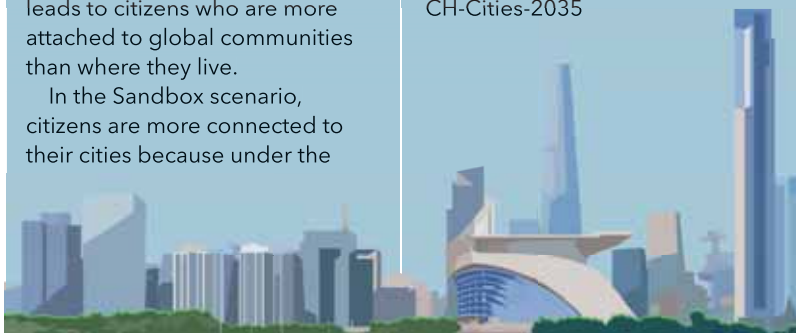
In the Sandbox scenario, citizens are more connected to their cities because under the

co-ordination of the municipalities they can create their own environment. Using local services and businesses becomes a focus of improving city life.

The Resort scenario puts municipalities firmly in charge of regulating quality standards for citizens and steering businesses to provide a balanced mix of services for citizens to enjoy and trust.

Finally, the Campsite scenario features a corporate-owned future of public spaces where major platform providers take the lead. Citizens are now digital nomads, free to roam and enjoy plug-and-play services in any particular city.

For more information about the report, see tinyurl.com/CH-Cities-2035



IPHONE CLIP COSTS DAD HIS JOB

An Apple engineer has been reportedly sacked after his daughter posted a video online showing off her father's iPhone X before the device's launch.

Filed in September at a café inside Apple's Cupertino HQ in California, Brooke Peterson demonstrated the iPhone X's large screen, lack of a home button and animated emojis function.

The US tech giant asked her to take down the clip, which was posted just days before the device's official launch in November, but by then it had gone viral after being reposted by news sites and technology blogs.

Despite removing the video, Peterson then revealed in a follow-up video post that her father had lost his job of four years because of the original clip.

According to technology website *Engadget*, an employee device would have sensitive information on it, including codenames for unreleased products and staff-specific QR codes. In addition, Apple prohibits filming at its HQ to prevent leaking company secrets.



By **Sandra Vogel**
Freelance IT writer
sandra@vogel.com

NEARLY A THIRD OF ONLINE TIME SPENT WITH GOOGLE AND FACEBOOK

An analysis of how British people spend their time online has revealed that between them Google and Facebook account for one in every three and a half minutes of web surfing (see below).

According to Verto Analytics, British adults accumulate 42.7 million days a month across Google properties - primarily search, YouTube and Gmail - the equivalent of more than one in every six minutes (17%) of UK internet time.

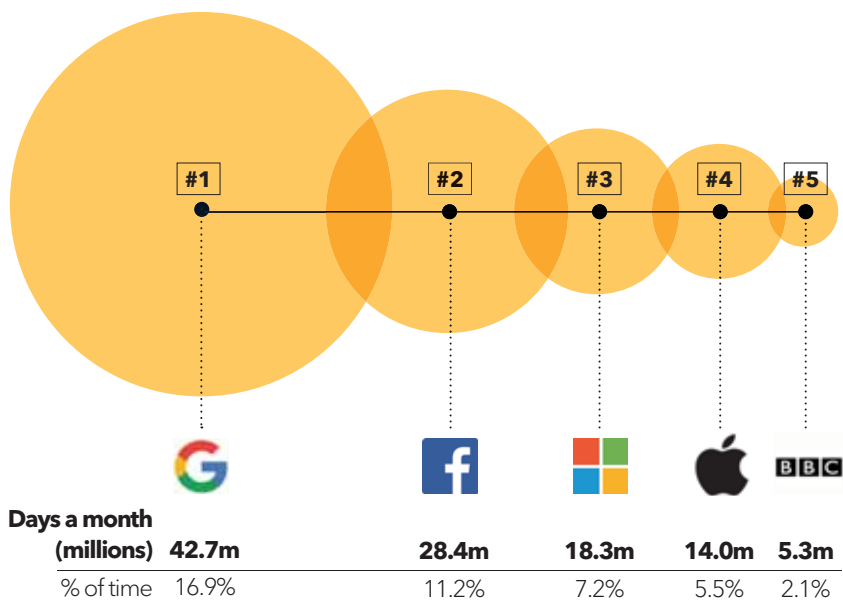
Around 11% of time (28.4 million days) is spent on Facebook-owned

properties which include WhatsApp and Instagram.

The BBC is the only UK company to feature in the top 10. In sixth place is Amazon with 5.2 million days a month; Oath, the combined Yahoo and AOL offer, is seventh with 4.9 million days a month; joint eighth is Ebay and Activision Blizzard with 3 million days a month, and 10th is Twitter with 2.8 million days a month.

Verto Analytics gathers data from consumers that own and use multiple devices. It compensates participants who install a measurement app on their digital devices \$5 a month.

TOP 5 MOST DOMINANT COMPANIES BY UK INTERNET TIME



IOT ADOPTION CONTINUES TO GROW - AND PROFIT

Vodafone's annual Internet of Things (IoT) barometer is now in its fifth year. *Vodafone IoT Barometer 2017/18* looks at IoT adoption across sectors in 13 countries involving organisations from SMEs to large multinational companies.

The report shows that 29% of companies are now using IoT. Of those that say they have experienced a rise in revenue, the average rise is 19% - but 36% said they have achieved an increase of over 20%. Where a reduction in

costs has resulted from implementing IoT, the average reduction is 16% - but 29% said they achieved reductions of more than 20%.

The report notes that the greatest benefits can come to organisations that adopt IoT at scale and embed it so that it is transformational. This is consistent whether the organisation is large or small.

The report spends some time looking at how IoT can help organisations transform and create new sources of revenue. Free download tinyurl.com/CH-VIOTB-2017

CAN AR HELP THE HIGH STREET?



Researchers from Warwick Business School think augmented reality (AR) apps can

help the high street. Research shows that people use AR to get more information on products, try products out before buying and see demonstrations. Mobile AR apps can also boost people's likelihood of revisiting a retail store and recommending a store to a friend.

For more information about the university's study, *Enabling smart retail settings via mobile augmented reality shopping apps*, visit tinyurl.com/CH-AR-WBS

UK STEPS UP DRIVERLESS CAR TEST FACILITIES

The development of driverless cars in the UK was given a £51m boost after the government revealed the winners of a funding competition.

Four projects spread across the West Midlands, Oxfordshire, Milton Keynes and London were the first to receive a share of a £100m fund unveiled in 2016. The money, which should receive industry matchfunding, is for upgrading testing facilities for connected and driverless vehicle technology.

Transport lab TRL will receive £13.4m to set up live test environments in Greenwich and Stratford's Olympic Park in London.

The Warwick Manufacturing Group will receive £17.6m to establish real-world test environments in Coventry and Birmingham.

Millbrook Proving Ground in Bedfordshire and Remote Applications in Challenging Environments based at the Culham Science Centre, Oxfordshire, will receive £6.9m to create test areas that mimic realistic city driving environments so automated vehicles can be tested before being taken on to public roads.

And £13m has been awarded to Horiba Mira in Nuneaton to build a new site alongside its existing vehicle test tracks where automated vehicles will be tested to the limit.

Simon Edmonds, Innovate UK's director of manufacturing and materials, said: "This first wave of testbed infrastructure investment is crucial at establishing a UK cluster of excellence to test and develop autonomous vehicle technology."

£51M

TO BE SPENT ON FOUR DRIVERLESS CAR PROJECTS





JESSICA PILLOW

I'm just back from realising my dream of living in the south of France, while my children attended the local primary school to learn French. I spent about two years preparing the business so I could manage it remotely. Here I will detail the tools that enabled my cloud practice.

To work remotely, or indeed to enable flexible working, I've found that cloud systems are the optimum solution as then your data is synchronised over all your devices - particularly handy when using mobile devices when travelling. However some of the cloud systems are still quite new and therefore lacking in features so a server-based solution on a hosted desktop is another option, and a quick way to move your existing systems online.

CENTRALISE AND SYSTEMISE

It is essential that your practice is paperless with all files stored electronically where your team can access them from anywhere they have an internet connection. We use a solution that synchronises our files onto our local device, which is very useful in avoiding connectivity issues if your internet connection is slow or unstable.

A central client database is key so everyone knows where to find client data. Ideally an administrator should oversee keeping the database tidy, so all data is current and consistent. This also helps meet the new General Data Protection Regulation (GDPR). It is handy if client contact details can also be accessed remotely (and securely).

Your practice needs to be fully systemised so every team member knows their role and the actions that are expected of them in any week. We use a cloud-based internal workflow tool that automatically allocates the next action in a job process when the preceding action has been completed. Clear reporting allows visibility over the progress of every

A FLEXIBLE FUTURE

There is now technology and systems that enable you to work anywhere in the world. It's easy to see how they can help in the pursuit of more flexible working

set of accounts and tax return, so these can be managed by an administrator.

Our online password storage crypt is invaluable for allowing the team members access to all the practice log-ins, so long as everyone makes sure they keep it up to date. This enables the administrators to run the practice without resetting lost passwords all the time. This would normally need dual authentication, and therefore require input from the managing director. We store our client passwords in a separate crypt for security.

I instigated an instant messaging system for internal communications so

my team could quickly talk with me and their emails didn't get muddled with all the other correspondence in my inbox. When I was travelling, it took less bandwidth for me to access instant messaging than our full email system.

We have used a VoIP phone system within our offices for many years now as it allows a seamless transfer of calls between team members, wherever they are working. Our latest system includes a mobile app so I can even receive calls when I'm travelling, again subject to sufficient wifi.

Having a shared cloud calendar and email accounts allowed my PA to take over diary management and tidy my inbox. Our system synchronised onto my local machine, which was invaluable when the internet connection was poor as I could continue to write draft emails to send later.

EMPOWER

For me, as the business leader, the key to working remotely was to see it as an opportunity to empower my team. Keeping everything accessible and transparent meant that my staff had clear objectives, as well as the information they needed to accomplish these tasks.

Flexible and remote working is available to all my team. In fact, one of them is planning to spend the summer holidays next year in New Zealand, where she will take three weeks' holiday but work the rest of the time remotely.

Remote working maximised the potential of my employees as well as making maximum use of the systems we had put in place. It is a means of working that is also a perfect fit for my flexible working team. ●

Jessica Pillow, managing director, Pillow May chartered accountants

A PLACE OF CYBER SAFETY

Alan Calder assesses how Brexit is likely to affect cyber security in the UK

Notwithstanding our present government's position on Brexit and the widespread uncertainty about the exact nature of the UK's proposed "deep and special partnership" with the EU, there is at least something we can be sure of: if we are to continue doing business with EU organisations after Brexit, we will need to abide by EU cyber and data security laws. What might not be obvious, however, is that we will also need to do so in order to trade with much of the rest of the world, thanks to the scope of EU law.

When it comes to cyber security legislation, the EU leaves other blocs in the shade (eg, the US doesn't have a federal cyber security law). In recent years, the EU has proposed innovative laws to improve member states' cyber resilience, such as the General Data Protection Regulation (GDPR) and the Directive on Security of Network and Information Systems (which affects digital service providers and operators of essential services rather than accountants), both of which come into effect in May 2018. With the European Commission's September 2017 Cybersecurity Package - a programme that is likely to increase in ambition and scope in the coming years - the EU will effectively set global standards on cyber security.

The UK government has proposed a new Data Protection Bill to enact the GDPR and will implement the NIS Directive in March 2018, so we will be compliant with EU law at the point we formally leave the union in 2019. After that point - unless, that is, a deal on data transfers is included in our transition arrangements - we will be classed as a third country and the EU will need to determine that we afford data adequate protection in order for data transfers to continue. This is where we encounter major challenges.

ADEQUACY DECISION

To date, the European Commission has adopted 12 adequacy decisions, with Andorra, Argentina, Canada (for transfers to commercial organisations that are subject to the Personal Information Protection and Electronic Documents Act) the Faroe Islands, Guernsey, Israel, the Isle

THE INTERNATIONAL TRANSFER OF DATA IS VITAL TO THE UK'S PROSPERITY

£240bn

Value of the UK's data economy

11.5%

of the world's data flows through the UK

75%

of the UK's cross-border data flows are with the EU



Alan Calder,
CEO, IT
Governance

of Man, Jersey, New Zealand, Switzerland, Uruguay and the US (for certified companies).

As the Confederation of British Industry's deputy director-general for policy and campaigns Josh Hardie told the confederation's September 2017 Cyber Security Conference in his keynote speech, the last third country to strike such a deal was New Zealand, and that took about four years. "I think we've got to be clear that we don't have four years," Hardie said. "With Brexit on the horizon there is a risk - I don't want to overstate it, but there is a risk - that we are facing a data cliff-edge."

If a deal is not reached, UK organisations will have to rely on binding corporate rules, standard contractual clauses or approved codes of conduct to transfer data to and from the European Economic Area until an adequacy decision is reached. To avoid this administrative burden, the UK government therefore "believes it would be in the interest of both the UK and EU to agree early in the process to mutually recognise each other's data protection frameworks as a basis for the continued free flows of data between the EU (and other EU adequate countries) and UK from the point of exit until such time as new and more permanent arrangements come into force".

Whatever your opinion of the EU, whatever your position on Brexit, it's an incontrovertible fact that international trade requires standards to be maintained, so it's in our interests to maintain a frictionless cross-border flow of personal data.

In terms of data protection, the EU is leading the way in setting those standards. If you want to supply that market, or even be in the supply chain of a company that does, then you need to conform with the likes of the GDPR - or risk being left behind. ●

DIGITAL TRANSFORMATION

A LONG AND BUMPY ROAD

Making the most of new technologies is not always straightforward. **Kirstin Gillon** looks at how finance functions have got to grips with digital

We have talked a lot over the past few years about automation, data analytics and the opportunities for accountants to spend more time providing insight to businesses. Automation means that computers take over more and more mundane tasks, and data analytics is the means whereby accountants can contribute this greater value.

So, when I was in New York for the annual American Accounting Association conference on big data, I took the opportunity to speak to some members working in businesses there to learn about their real experience around this shift in role and focus.

There is certainly broad agreement on the desired destination. Whether

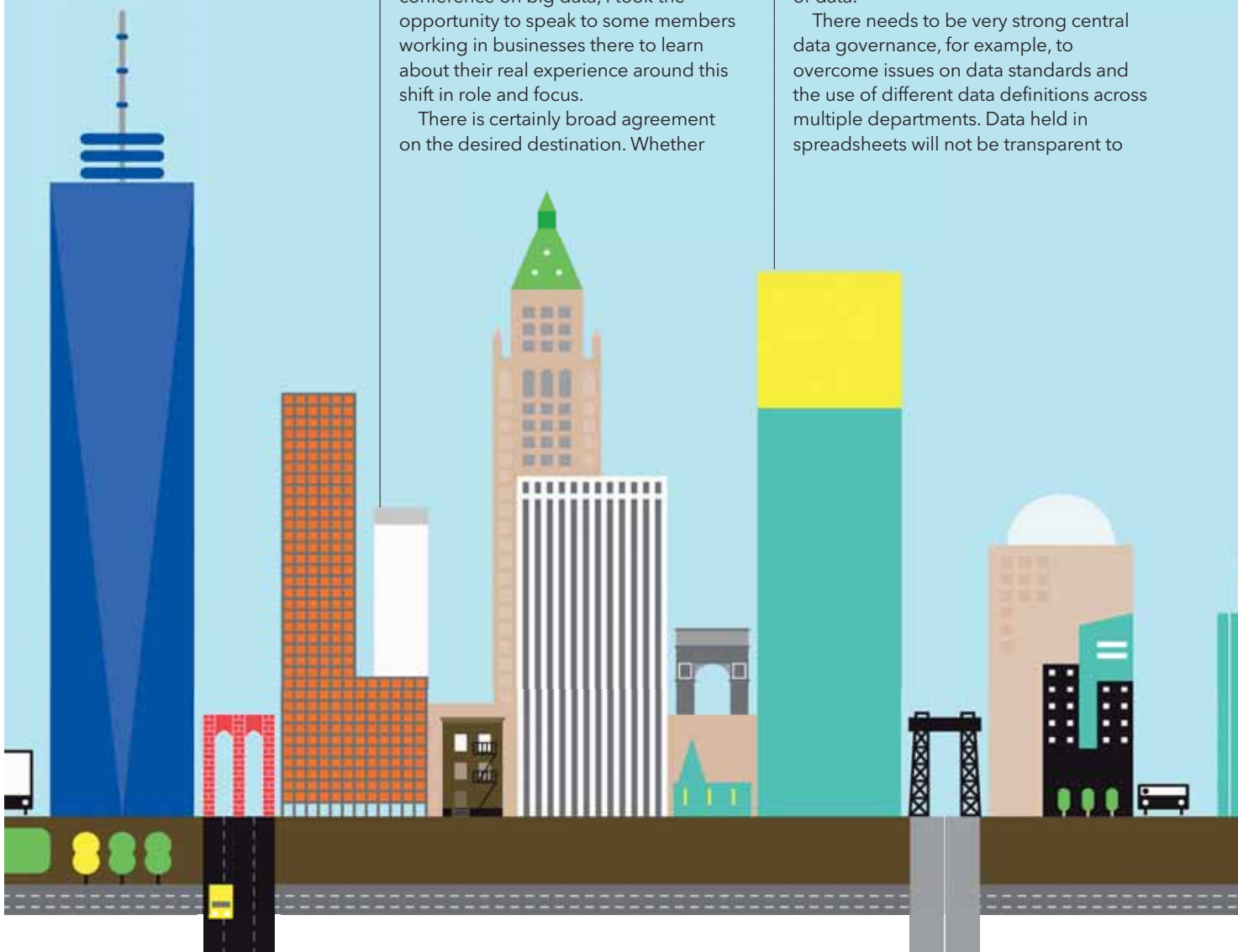
organisations had formal 'bot targets' or were still working out their strategy on robotic process automation (RPA), there is a strong desire for computers to take over as many standard finance processes as possible. Equally, there was a lot of investment in data and related tools to enable accountants to support their businesses better.

However, all were struggling with two basic challenges – complex legacy environments, and the impact that has on data quality and standards, and building the right skills and thinking among staff.

OVERCOMING DATA CHALLENGES

It's no secret that many large organisations are burdened with complex IT environments that are the result of mergers and acquisitions, decentralised decision structures and legacy systems typically held together by a large number of spreadsheets. The systems may all work individually. But this kind of IT estate makes it very hard to make the best use of data.

There needs to be very strong central data governance, for example, to overcome issues on data standards and the use of different data definitions across multiple departments. Data held in spreadsheets will not be transparent to



other users. As a result, linking data across departments becomes very difficult in practice. It is, of course, possible to overcome these challenges and build a strong data infrastructure. But it typically takes a lot of effort, time and resource to achieve.

Being able to make the case for investment in data and back office systems is therefore an important underpinning for digital transformation. While most organisations will intuitively understand the potential benefits from better data to support decision-making, articulating tangible returns is hard, especially when competing with others across the organisation for resources. Doing things in phases, starting in areas with the biggest tangible opportunities and focusing on the outcomes from access to better data, can all help to get broad organisational buy-in.

THE TRANSFORMATION OF ROLES

Building the right mix of technical skills is clearly an important element for finance functions if they want to maximise the potential of different technologies. Indeed, the ACA qualification has been updated in recent years to reflect market demands for stronger skills in IT and data.

But making the most of opportunities is about more than just technical skills in IT and data. The nature of many roles is transformed by data analytics and members described this in various ways. For example, there may be a shift from providing a spreadsheet with 10,000 rows of data to providing a very small amount of data that provides evidence for a specific decision.

Or, instead of spending hours producing a comprehensive risk report, an accountant might end up spending a fraction of the time highlighting the key issues and then focus on areas of highest risk.

This needs an entirely different focus - questioning, challenging and advising for example - which emphasises critical thinking and influencing skills. It also needs a willingness to change and embrace new tools. In particular, it seems to be a real challenge in some cases to

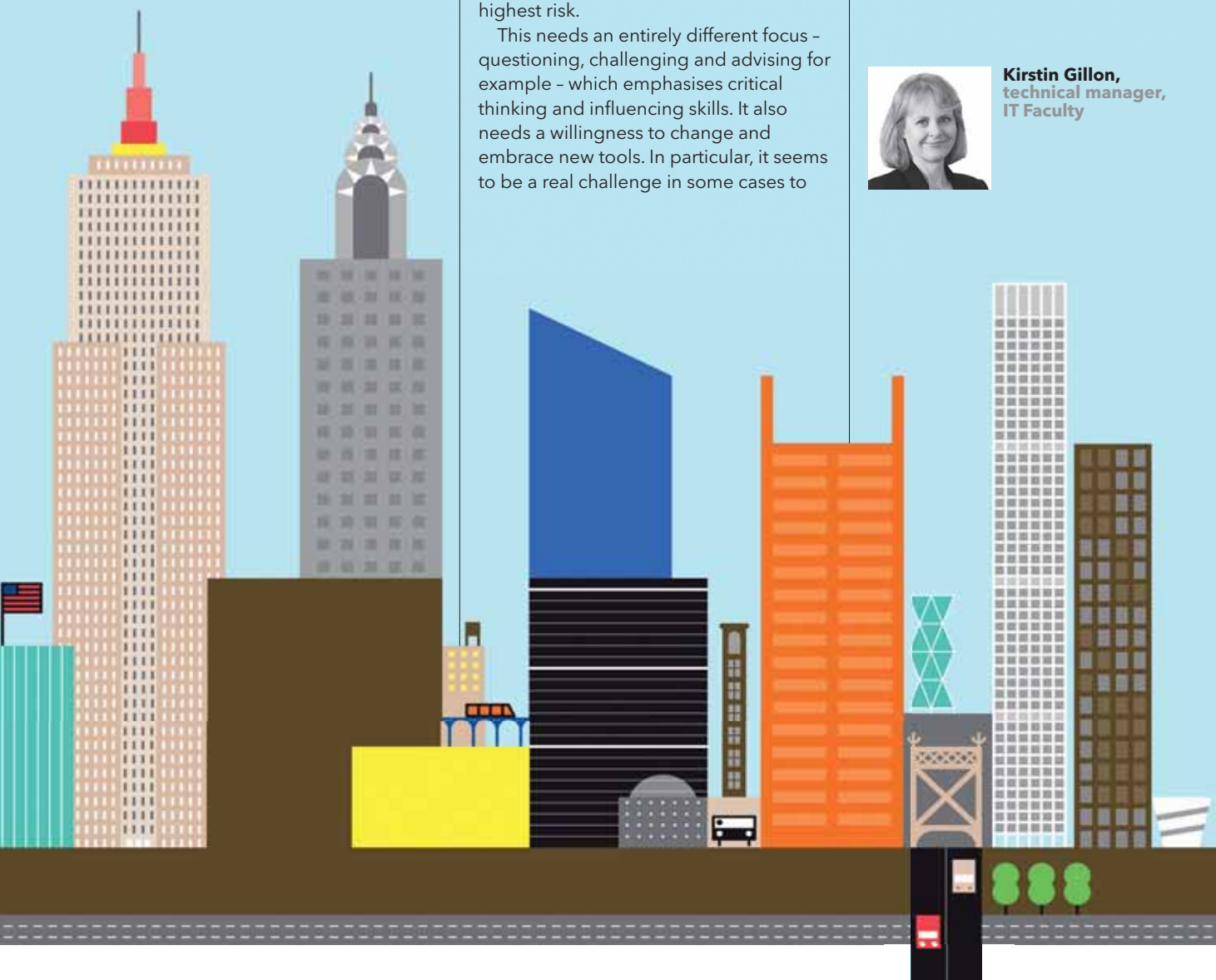
get accountants to move away from spreadsheets and use other tools. Recognising this wider transformation of roles, recruiting the right skills and supporting staff in these changes are therefore all vital to success.

START AT THE BEGINNING

We have focused a lot in the last few years on the opportunities from technology. But realising that potential can be really hard in practice. Even where the vision is clear, many organisations struggle with the sheer complexity of systems and data structures. Furthermore, embracing these opportunities requires quite a different approach to the job. It's a long and tough journey for many, but it is vital that finance functions start to develop strategies for their own transformation so that they can make the most of digital opportunities and support their businesses better. ●



Kirstin Gillon,
technical manager,
IT Faculty



Breathing space

Having admitted that plans to move all businesses to quarterly digital tax returns by 2018 were ambitious, the government has extended the timescale for its Making Tax Digital for Business (MTDfB) project. But while many in the profession – and those among their clients aware of the changes – heaved a sigh of relief, this is no time for resting on proverbial laurels. In April 2019, MTD will take effect for businesses with turnover above the VAT threshold of £85,000, and with a wider rollout by 2020, there isn't much breathing space.

Here Penelope Rance talks to stakeholders in the MTD process, who outline their concerns about the shifting timescale and what needs to be done to make HMRC's digital dream a reality

£85,000

The VAT threshold over which MTD will take effect for businesses in April 2019



Caroline Miskin, technical manager, tax practitioner support, ICAEW Tax Faculty

Businesses with turnover over the VAT threshold will be obliged to use MTD-compliant software to file VAT returns from April 2019. Only about 12% of VAT returns are currently filed directly from commercial software, but affected businesses cannot plan for the change as requirements have not yet been finalised and there is no software to test.

The pressure is off with regard to MTD for income tax, but it has not gone away; HMRC still expects it to become mandatory. The pilot for income tax is currently in "controlled go live" – and we would encourage agents and businesses to join the pilot to test the systems. When and how MTD will be implemented for corporation tax, particularly for the most complex businesses, is still a matter for discussion.

The biggest issues are uncertainty over when mandation will start; the details of the requirements; when software will be available; and whether it will meet the needs of all businesses. The government has given an undertaking that MTD will not be made mandatory for taxes apart from VAT until the systems are working well, and success will depend on this undertaking being honoured. It will also help if there is an appropriate level of exemption for the smallest businesses (higher than the £10,000 that has been considered) and if HMRC shows flexibility in applying the digital exclusion exemption. A soft landing on the penalty regime would also be helpful.

I expect that MTD will eventually be implemented more or less as envisaged by HMRC, but the timetable may need to change again. ICAEW has consistently argued that businesses will adopt digitalisation where there is a business case for doing so. The intention is the right one, but the requirements should not be mandatory.

**Adrian Rudd,
tax director, PwC**

It's crucial there is a proper pilot – not just of technology, but also understanding the behavioural aspects of MTD. Anyone who has tried to implement a change programme will know that changing behaviours is much more important than technology, and that will apply to MTD as to any other project.

Most businesses earning over £85,000 have good accounting records already, and are used to regular VAT filing, but will need to adapt their systems to deal with MTD. The technical specifications for MTD should be made available at least a year before the start date, so that businesses can test the new systems properly.

Businesses that plan ahead will be ready. Larger businesses will need to adapt their existing accounting systems; those who use commercial packages will need to check with suppliers to ensure the software will be compliant with MTD. Those who don't currently keep records digitally will need to start, and should be talking to their advisers now.

The direction of travel is clear, and it's likely that in 10 years' time almost all businesses will be fully up to speed with digital recordkeeping and providing regular updates to HMRC.



**Mark Taylor, technical manager,
technical innovation, ICAEW IT Faculty**

My feeling is that MTD is largely around understanding, digitally codifying and potentially simplifying the existing tax code. Simply put, MTD is 80% about tax and 20% about digital. The reality for many organisations is that MTD is an opportunity to digitalise their existing business and make cost savings through increased efficiency. Equally, it needs to be recognised that some organisations, particularly sole traders, may never become digital in any meaningful sense.

While the initiative has been limited in the first phase to VAT, there are areas of uncertainty around the implementation – the agent authorisation process, the escalation process in the case of technological issues and the role of spreadsheets have yet to be fully defined.

There is a lack of understanding of how complex companies that use enterprise resource planning solutions will provide VAT returns. The value of these systems is in their bespoke nature. In all likelihood, these organisations will have to devise further bespoke solutions to accommodate MTD.

The role of any pilot is to obtain evidence that the proposed solution is functioning as expected. However, in the case of MTD, the pilot should also provide the opportunity for HMRC to develop the authorisation and verification, escalation and technical fault resolution processes.

Many companies are investigating the possibility of providing free software, but the challenge remains to find a business model that can support this. There are concerns about the viability of companies that have not developed a long-term business plan to ensure they remain in business.

MTD is 80% about tax and 20% about digital. The reality for many organisations is that MTD is an opportunity to digitalise their existing business



Jacquelyn Kimber, tax partner, Newby Castleman

MTD represents a huge shift in the way taxes are administered, both for us as an accountancy practice and for our clients. The way in which MTD was initially introduced gave the impression the policy wish was riding roughshod over the practical obstacles presented by MTD for HMRC - let alone software developers, accountants and taxpayers. HMRC's "climb down" on the scale and timetable does at least show it is listening.

On a practical level, we will have a huge part to play in helping clients adapt to the new system and have been trying to get the message across that they need to start planning for MTD. On the ground, the issue is software, software, software! We are waiting for our providers to come up with MTD-compliant products, but so far have seen nothing. We want to be confident we can help our clients deliver on their MTD obligations, but testing will take time. We are taking part in the pilot, but building up experience of the challenges presented by MTD will be difficult.

If MTD is to be a success, it has to work for business, accountants and HMRC alike. Businesses need persuading that MTD is more than just a data-gathering exercise for HMRC's benefit, and that investment in cash and time is worthwhile in making the administration of taxes more straightforward. HMRC would do well to remind everyone of the more useful aspects of MTD, such as pre-population of data.

The optimistic view is that MTD will present an opportunity for accountancy firms to move the emphasis of their business towards a more advisory role, but at present that feels a long way off.

Paul Aplin, partner, AC Mole & Sons

I think everyone breathed a sigh of relief when the minister made the announcement. The original timetable would have been very difficult, if not impossible, to deliver on. One of the main concerns was over training and support: the time needed to do this effectively would have been huge in the micro-business population.

The delay has taken some pressure off, but the fact is that software and apps are developing rapidly and major banks are now offering digital products that integrate with the main software brands. This is creating demand in the marketplace that firms need to respond to. Agents need to look at how digital can help clients and encourage them to embrace it where it is the right solution for their business needs. I would also like to see as many agents and businesses as possible join the pilot programme. The needs of businesses and agents will be better embedded in the final MTD architecture if HMRC is working with data from a broad spectrum of cases. The experience gained will enable software providers and HMRC to make adjustments so that on full launch, the system will face fewer issues.

I take the minister's assurance at face value: there will only be further rollout when the system has been shown to work. As more small and micro-businesses adopt digital recordkeeping as the right business decision, then MTD data will increasingly be a by-product and not the *raison d'être* of going digital. MTD may be a catalyst for change, but software that works well for businesses will drive change naturally.

Agents need to look at how digital can help clients and encourage them to embrace it where it is the right solution for their business needs





Phil Sayers, CEO, Clear Books

The majority of software providers are committed to providing products that comply with MTD requirements, although I'm aware of one that says it won't be making its product MTD compliant, effectively announcing that product's demise.

The shifting timetable provides more time to ensure compliance, but has affected providers who invested heavily in developing functionality that isn't now required for another two and half years. My biggest concern is the significant number of accountancy practices who aren't convinced MTD will happen, so are waiting before making decisions about how to help smaller clients. The sooner accountants start the migration process, the less likely they are to miss the deadline. HMRC still needs to define some of the processes.

At the recent Business Application Software Developers Association summit, HMRC was also criticised for "moving the goal posts" without properly consulting with the people who are expected to provide the working solution.

Adam Prince, vice president of product management, cloud services, Sage

As with all mandated compliance changes, different vendors are responding to MTD in various ways. The forward-looking ones see MTD as an opportunity to advance digitisation, but some see it as a roadblock. At Sage we believe digitisation is a good thing; once data is available in digital form it is possible to apply the latest technology such as machine learning, business intelligence and artificial intelligence to drive greater insight and reduce (or eliminate) manual administrative activity.

No one likes the idea of more forms or recordkeeping, but most people like the idea of reduced cost administration and the chance to operate a better business through more timely advice or action.

The pilots will help generate trust that the process works - that HMRC is able to process both simple and complex tax scenarios (and agent relationships). They are also likely to highlight the benefits of tightly integrated solutions with automated data flows (primarily those that are born in, or talk to, the cloud).

Sage is following a well-trodden path in developing solutions that deliver genuine value, working closely with advisory panels and customers to ensure issues are identified and addressed. We will be actively testing software via internal testers and members of the appropriate advisory panels and beta programmes.

In choosing MTD software, as with any tool, product or

solution, users should select reliable partners and vendors and take advice from trusted partners such as their accountants. There are a number of free and low-cost solutions already in the market: price alone should not be an indicator of the reliability of software. ●



HMRC

In response to *Chartech's* enquiry, an HMRC spokesperson said: "Accountants have a critical role to play in supporting their clients to get ready for Making Tax Digital for Business. There is plenty they can do now to help people get ready, in particular encouraging clients to start keeping digital records if they aren't already, and thinking

about whether any of them could be suited to take part in the pilots as early adopters."

HMRC'S MTD POSITION

After listening to stakeholder feedback the government slowed the pace of change and businesses won't be required to use the MTD system until April 2019, and then only to meet VAT obligations. This will apply to businesses with turnover

above the VAT threshold, however HMRC expects many businesses, regardless of size, will move to digital record-keeping.

The first businesses have started keeping digital records and providing updates to HMRC as part of a live pilot. HMRC will expand that pilot over the coming months, with small-scale, technical testing followed by a wider pilot in spring 2018.

MTD RESOURCES

ICAEW's guide to MTD:

[tinyurl.com/CH-MTD-Guide](https://www.icaew.com/CH-MTD-Guide)

HMRC's information page:

[tinyurl.com/GOV-MTD-Info](https://www.gov.uk/government/consultations/making-tax-digital-for-business)

For Sage users:

[tinyurl.com/CH-Sage-MTD](https://www.sage.com/CH-Sage-MTD)

For Clear Books users:

[tinyurl.com/CH-CB-MTD](https://www.clearbooks.com/CH-CB-MTD)

For Xero users:

[tinyurl.com/CH-Xero-MTD](https://www.xero.com/CH-Xero-MTD)

For Digita users:

[tinyurl.com/Digita-MTD](https://www.digita.com/Digita-MTD)

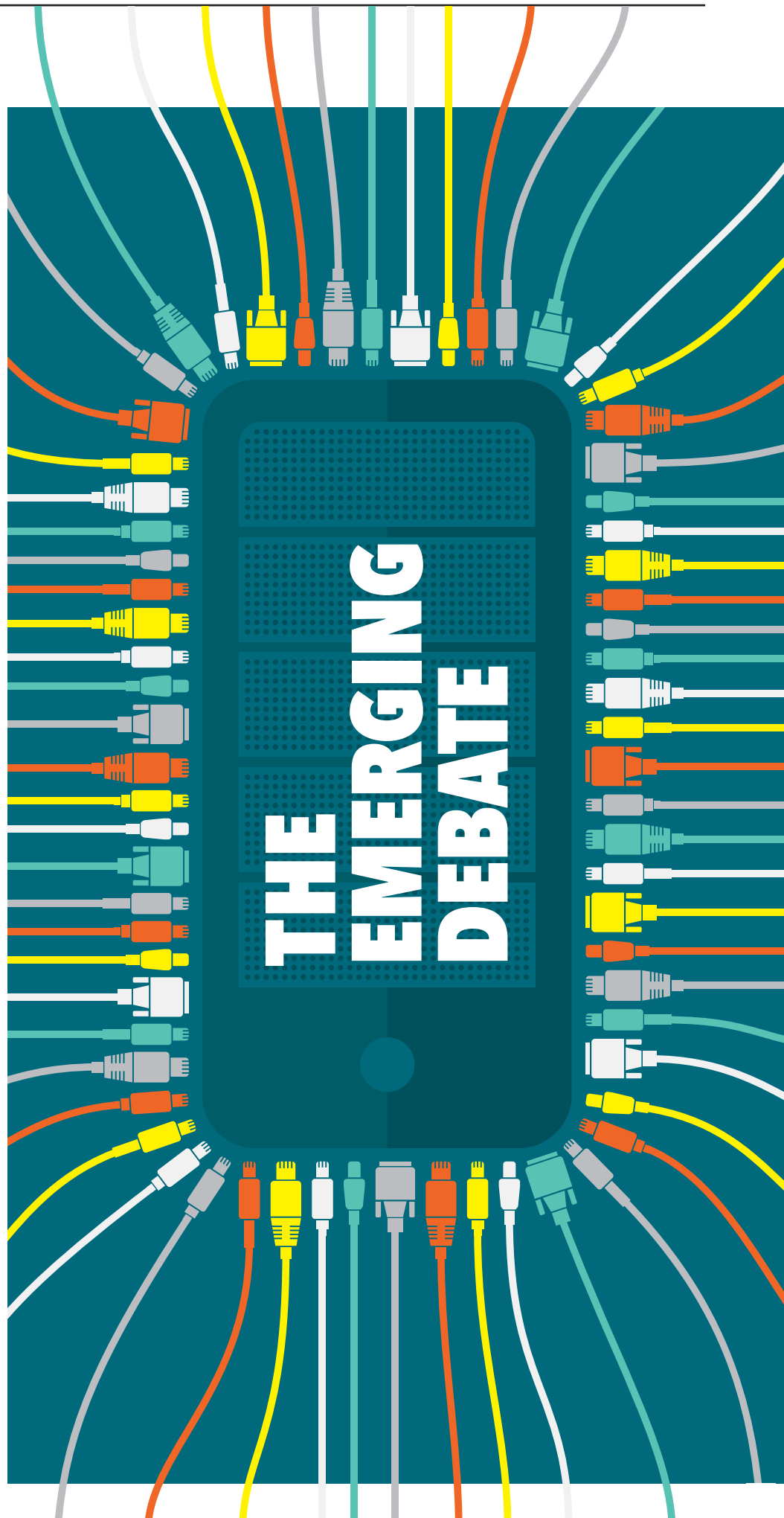
David Lyford-Smith

urges gatherers and users of big data to always keep ethics in mind. Not only will your clients thank you, but it will also keep you ahead of the regulators

“Big data” are the buzzwords across industry and practice right now. More and more organisations are looking into doing it, and as tools improve and become cheaper, more and more can get their hands on the tools to analyse the enormous volumes of data that our modern society generates and tracks. But the incoming General Data Protection Regulation (GDPR) has also sharpened attention on what not to do with data.

But good practice doesn't just consider how to stay clear of the regulator's red pen - after all, plenty of companies have been exposed doing things that were within their legal rights, but still cost them dearly in the court of public opinion. These aren't just reputational costs, but real ones, with consumers looking elsewhere in the wake of a scandal.

As chartered accountants, we all have an obligation to act with integrity and professionalism. But the power that big data can let organisations wield is considerable, and breaches of ethical behaviour can come about easily, even without culprits realising on occasion. Treating the whole process of data - collection, storing, analysis, use, retention, updating, and deletion - with due ethical care is not only a moral imperative, but a professional and business one as well.



CASE STUDIES

Targeted advertising

The Target supermarket chain drew significant attention in 2012 after a Charles Duhigg story in *The New York Times* showed the depth of the knowledge a large retailer can garner on its customers. Wanting to target pregnant women at the second trimester, when their shopping habits are open to sweeping changes, Target was able to statistically identify pregnant customers by looking at seemingly unrelated product purchases, such as unscented hand lotion. They would then send the women coupon books with seemingly random mother-and-baby items mixed in, to avoid appearing too knowledgeable, but while still grabbing the customers' attention and shopping habits.

The story showed that even limited data from one source has the power to identify deeply personal information about consumers. Target is by no means unusual in using this kind of information - indeed, loyalty cards of all kinds are designed to help retailers collect data on their customers in this way.

Facebook stalking

For a week in 2012, Facebook carried out a study of 700,000 users in conjunction with two US universities. The emotional content of the users' feeds was skewed - they were shown either more positive or sadder stories from their friends' timelines - and then the users' own posts were measured to see if this change had an effect on the users' mood and how they presented it.

Now, all of this was (and still is) within the terms and conditions of Facebook's service agreements - and indeed Facebook made no attempt to hide this study. But the public backlash was considerable, and Facebook had to make promises to change how such studies were done in the future.

The case shows that simply because someone has absent-mindedly checked an "I agree" box at some stage, does not mean that they will necessarily be all right with any legal use of their data. Consent is complex, especially given how much more can be done with limited data than people might imagine.

Pokémon Go-ing beyond what was intended

Developer Niantic had moderate success with the early augmented reality (AR) game Ingress, driving users to mark points of interest in the real world as they explored the virtual world of the game. On the basis of their experience with Ingress, Niantic won the work of developing the landmark licensed AR game, Pokémon Go.

Shortly after release, Pokémon Go came under fire for racial disparities: It was notably more expensive to play the game in minority neighbourhoods than in predominantly white ones. Gyms and Pokéstops in the game that provided players with free items were, as in Ingress, attached to "areas of interest" in the real world. But Niantic had populated the list largely with a user-generated list from Ingress. Ingress's player base was dominated by white, English-speaking young men, and their different social and cultural background had been transferred to the locations they tended to flag in Ingress. Pokémon Go's much larger and more diverse audience then found that minority neighbourhoods were disadvantaged, with players from

minority areas receiving fewer freebies and generally having to pay more for the same experience.

This is an example of how using data carelessly can have unforeseen effects - all data includes biases, and generalising data from even a large population is often impossible. What's more, data collected from society will reflect the biases and flaws in that society itself, and ingrained differences in racial, gender and class elements will be replicated in the model unless it is specifically considered and adjusted for.

A BASIS FOR BIG DATA ETHICS

There are plentiful existing guidelines for human-subject research in the academic and other fields. Big data, and specifically its use by businesses and other organisations, often falls foul of the fact that data science methods and attitudes have grown out of so-called hard sciences such as physics, where matters of privacy and ethical treatment are not usually considered. So if we are to use big data in our businesses and other organisations, we have to explicitly introduce ethical considerations and make them a priority.

See icaew.com/bigdata ●

FURTHER READING

The examples and concepts covered in this article are based on research of the existing literature in the field of big data ethics. Particularly recommended are:

- *Perspectives on Big Data, Ethics, and Society*, by The Council for Big Data, Ethics, and Society
- *Unified Ethical Frame for Big Data Analysis*, by the Information Accountability Foundation
- *The Opportunities and Ethics of Big Data*, by the Royal Statistical Society
- *The Data Ethics Canvas*, by the Open Data Institute

Below is a summary of three key lessons I drew from my review of the literature on ethics as applied to the processes surrounding big data.

First, don't underestimate the ethical content of your big data activities. Every

part of the process can contain an ethical issue to consider - it's vital to proactively consider the ramifications of your approach. For example: How is data collected, and is it genuinely clear to users how it will be used? Apply the "person on the street" test - if what you are doing was published openly, would you be uncomfortable?

Second, remember all data is biased due to the process that collects it, the process that "cleans" it ready for analysis and the societal biases present in the pool of subjects being analysed. Any application of analytics must actively work to remove and counteract biases and no data is truly "raw" or "pure".

Finally, not using data or not sharing can be unethical in many circumstances. If your data could improve the lives of data subjects, then withholding or abandoning it is a greater disservice than analysing or using it without proper safeguards and care.

POWER BI DESKTOP - PART TWO

Simon Hurst continues his guide to data display with some tips on how to keep up to date with changes and enhancements to customise your content

As pointed out last time, for those accustomed to the three-year Microsoft Office update cycle, Power BI Desktop is much more dynamic, with significant changes and enhancements being introduced monthly. Accordingly, by the time you read this, some of the features and techniques that we cover may well have changed. In the event of any particularly significant changes, we will aim to include details on the IT Counts blog (tinyurl.com/CH-ITCounts). Power BI Desktop can be downloaded from: powerbi.microsoft.com/en-us/

FACEBOOK AS DATA

In the first part of the series we created separate queries to retrieve the posts in the Facebook pages of Donald Trump and Hillary Clinton and then combined them, so that we could create a simple Stacked Column chart comparing the number of posts over time (Figure 1).

GROUPING DATES

At the moment, our Date field is automatically grouped into a hierarchy. We just want to see our post statistics grouped by month. We can right-click on our Date field in the Fields pane and choose New Group, then group by Monthly bin (Figure 2).

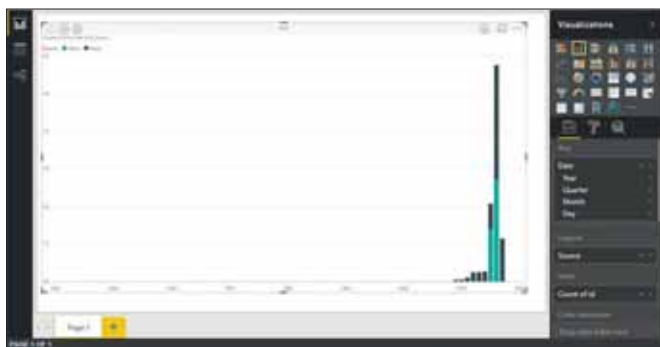


Figure 1

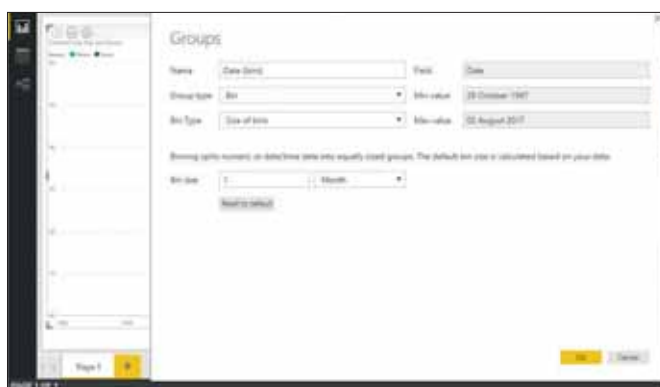


Figure 2

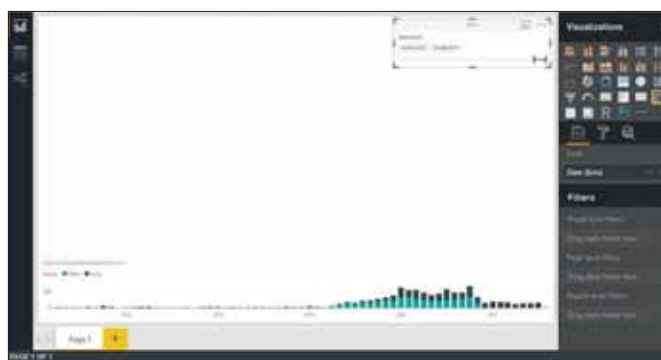


Figure 3

We can then untick our Date field and select our Date (bins) field instead. Due to some Life Event postings, our minimum date value is 26 October 1947. We will change the size of our chart visual and then click outside it, before adding a Slicer visual to our Power BI page, based on our Date (bins) field, so we can focus on more recent posts. Here we have set the Slicer to start in 2012 (Figure 3).

WORD CLOUD

The Word Cloud visual is not currently one of the built-in visualisations. The Home ribbon tab, Custom visuals group includes a From Store option that lists an extensive range of additional custom visuals, including Word Cloud. The Word Cloud visual shows the words included in a field, with the comparative frequency indicated by the size of font used for each word (Figure 4).

When we click the Add button next to our chosen visual it will be installed in our list of available visualisations. We can use it to create a Word Cloud based on the contents of the message column of our combined query (Figure 5).

For each of our visualisations, there is a Fields pane, where we allocate fields to the different areas available within the visualisation pane; a Format pane and an Analytics pane. We will use the Format pane, indicated by the paint roller icon, to

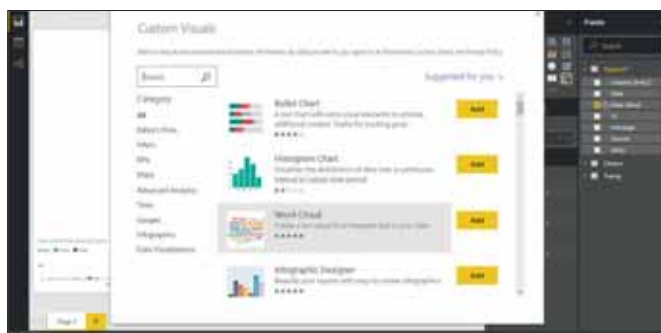


Figure 4

turn on the suppression of certain words from the cloud. The Stop Words option can be turned on to suppress words from a default list containing the likes of 'the' and 'and'. In addition, you can create a custom list of other words to be suppressed. We will just turn on the Default Stop Words.

Our Word Cloud currently includes all the words in both sets of Facebook messages for the dates selected in our date Slicer. We will copy our Word Cloud and paste the copy next to the original visual. The Visual tools, Format ribbon tab includes an Align dropdown that can align multiple selected objects precisely. Multiple objects can be selected by holding down the control key.

We can then add our Source field to the Visual level filters area and set one Word Cloud to just show the Trump posts and the other the Clinton posts (Figure 6).

VISUAL INTERACTIONS

By default, all visuals on a page are linked, so that selecting an element in one visual will apply the same filter to the others. The Visual tools, Format ribbon tab includes an Edit Interactions button that displays icons in each visual to allow us to choose how the interaction works - depending on the type of visual it can be filtered, highlighted or set to no interaction at all.

In our example, we could click on one of the sections of one of our columns. With the interaction for our Word Clouds set to the default of filter, our Word clouds would both be filtered to only display the results for that source for that month. We can hold down the control key and click to select additional items. Here, we have selected both source sections for October 2016 (Figure 7).

ANIMATION

Another custom visual - Play Axis (dynamic slicer) - animates a Power BI page. It is installed in the same way as the Word Cloud visual.

In our final example, we have formatted the background of each Word Cloud visual in the colours of the associated political party and changed the colours of our chart columns to match. We have also set the interaction of our column chart to highlight rather than filter with regard to our Play Axis visual. When we start the player, to which we have added our Date (bins) field, each month will be highlighted in our column chart and our two Word Clouds will be filtered to show the results just for that month (Figure 8). ●

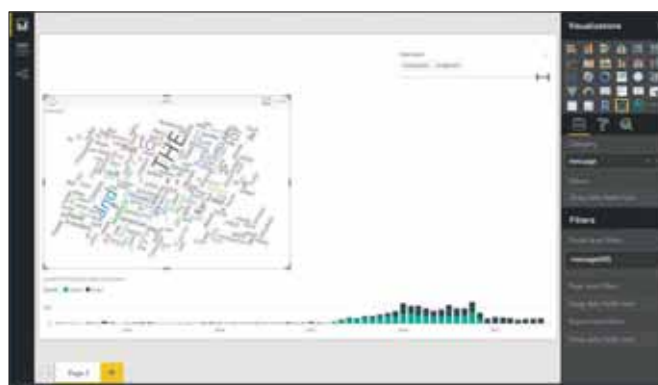


Figure 5



Figure 6



Figure 7

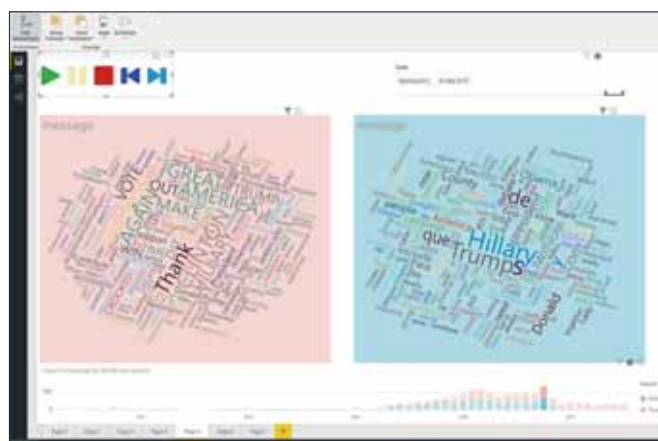


Figure 8

OTHER OFFICE TIPS

The Excel Community site includes many articles on Excel and other office software. In addition, there is a forum (tinyurl.com/CH-ExcCom) where you can ask, and answer questions.

The IT Counts site includes articles of more general interest and it too has a forum: tinyurl.com/CH-ITcounts

Both IT Counts and the Excel Community are available for free to all IT Faculty members as part of their subscription.

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

Simon has also included many Excel tips in the Lunchtime Learning section of his website: tinyurl.com/CH-Lunch



LEO WALDOCK

When Tim Cook, CEO of Apple, launched the iPhone 8 and iPhone X we witnessed an apparent Apple failure. The design of iPhone X uses a front panel that is all glass without the traditional hardware Home button, which means Apple has had to provide a new mechanism for waking the phone from its locked state. They have chosen to move from Touch ID, which uses a fingerprint reader, to Face ID that relies on facial recognition as a log-in system.

The Face ID system uses dual cameras and infrared to scan your face, create a hashed model and then store the result securely on the iPhone's Secure Enclave chip. It was amusing when the demo failed at its launch, however it could be argued it proved that Face ID is truly secure. When you input a PIN incorrectly, or use the wrong fingerprint on a reader, the phone first warns you and then locks you out. As you might imagine, the demo iPhone X had been passed from person to person backstage before it arrived in Craig Federighi's hands and each of those faces had acted as a failed attempt to unlock the phone. When Cook looked at the screen the phone had been locked out and therefore refused to respond.

My natural inclination is to be sceptical, but the truth is that I don't mind the idea of my phone storing a digital model of my face. Though I do wonder how that data will be used.

It seems clear that Face ID will be used to unlock your handset until it next times out. So if you want to show photos to a group of friends, you pick up your phone, it magically unlocks, you open your photos and can pass it around for them to take a look.

The obvious thought is that if you are stopped by the police, immigration or other authorities who think it might be

IT'S WRITTEN ALL OVER YOUR FACE

Is the iPhone X's facial recognition technology all it's cracked up to be?

My natural inclination is to be sceptical, but the truth is that I don't mind the idea of my phone storing a digital model of my face. Though I do wonder how that data will be used

an idea to take a look at your phone then you basically cannot stop them. They can hold up your phone to your face and as soon as it detects you it will unlock without any need to compel a fingerprint or PIN code. In a similar way, two burly blokes who want access to your online banking would have little difficulty grabbing your phone and using your face to unlock it, although that probably isn't a major change from the status quo.

Personally I would be more alarmed by the prospect of a bunch of jokers at the pub grabbing your phone and passing it down the line so it received half a dozen wrong face signals in a matter of moments and decided to shut down for a while. That would be annoying.

There have been concerns that the iPhone X might be incapable of effectively differentiating between non-Caucasians, on the basis that Apple might have trained the phone with a database that was skewed towards Caucasians. This may or may not be the case, but the fact is that facial recognition is already used in China by Baidu, Alibaba and Tencent. Indeed you can pay for your tasty KFC dinner by smiling at your phone, provided you are in the correct KFC and use a system from Ant Financial.

I am happy with the system used by iPhone X where your facial signature is held securely within your own handset. The next step is likely to be an online or cloud repository of biometric data, which would be alarming. This would take us back to the argument about the mechanics of the National ID card scheme, which didn't end well. Provided the iPhone X isn't the thin end of the wedge then all is well and good. ●

Leo Waldock, freelance IT writer

**WORK FOR
CLIENTS**

**WORK WITH
CLIENTS**



PROUD PARTNER OF
THE WORLD'S
YOUNGEST F1-WINNER:
MAX VERSTAPPEN

A stylized black signature of Max Verstappen.

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Model shown is C-HR Dynamic 5 door Coupe FWD Hybrid 1.8 VVT-i Auto at £28,085. Prices correct at time of going to print. 5 year / 100,000 mile manufacturer warranty subject to terms and conditions.