

smartCIO

EMEA Edition | Brought to you by Workday | Vol 2. 2021

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IT in 2021 needs bouncebackability

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Editor's comment

A warm welcome to the second edition of smartCIO EMEA – *the* magazine for Chief Information Officers and the EMEA IT community in general.

Our mission is to share the latest technology and leadership insights to help create and educate a community of current CIOs, and those aspiring to move into the role.

As I look at the articles we're bringing you in this issue, the key themes that really stand out are the need for 'agility' and 'resilience'. The former is an overused term and one that has historically smacked of marketing speak. The latter is a term that has seemingly been on the CIO's 'to-do' list forever, but has never been very 'sexy'.

Today, these two terms are coming together as we begin to emerge from a situation that has forced business and IT leaders to completely rethink the way companies operate and how they look at technology. IT has emerged from the pandemic as a key protagonist and enabler – the function has proven itself.

IT has proved that it can act with agility when companies across the world are thrown into crisis situations. It has shown that it can build business resilience into core systems.

Being a communications person I can't help but try to put a badge on this – are CIOs now the key orchestrators of 'agile resilience', or 'resilient agility' for the business?

I know most of you will read that last paragraph and be appalled. I'm sorry. But it is important. The huge successes of CIOs and IT departments over the last year should be shouted from the rooftops

and celebrated. And I hope this edition of smartCIO does just that.

I think Martin Veitch sums it all up incredibly well (as always) in his thoughts around 'bouncebackability' – and how the CIO and IT can come out of the current situation stronger, better and yes, more agile and resilient.

We then have conversations with the CIOs of Veolia UK and Pick n Pay, who discuss the impact of COVID-19 on their own approaches to technology strategy and dealing with the situation. Deloitte also provide views on the key topic of agility for the CIO. As well as some findings from a recent piece of research around organisational agility and digital acceleration. All are well worth a read.

But of course, it's not just about the 'day job'. If, like me, you're fascinated about where technology can (and will) take us as businesses and as societies, please do check out the conversation with technology thought leaders David Rowan, Gemma Godfrey and Inma Martinez. I was privileged to be part of organising this conversation and hearing their views.

Our aim for smartCIO is that it provides you with insight, opinion and discussion around the key leadership, business and technology topics that are relevant to you and your role in modern business in EMEA.

We look forward to you joining the conversation. Please give us feedback, suggest new ideas, offer your own expertise and insight. We can't wait to hear from you.

Grant Currie
Editor-in-Chief

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IT in 2021 needs bouncebackability

In the parlance of football (or 'soccer', if you really must) they call it 'bouncebackability'. When you're hammered 5-0 at home by your biggest rivals, you need to show you can go again. You need to show some resilience, and the heart and stubbornness to come back hard.

Now more than ever as we emerge from a universal crisis, we need those qualities. Of course, 2020 was awful. But as we crawl out from under its ruins and survey the damage, we will need to have some fresh thinking to deal with a year that is already having its weird moments too. Business will play a full part in the economic, but also human, recovery in the road that lies ahead of us. Shocked as we undoubtedly are, we need to rally and go again. Is IT ready to support and even lead?

The answer, frustratingly, of course, is 'it depends'. Large companies that have spent heavily on IT and other infrastructure should have built the defences and adaptive infrastructures to withstand even the

unexpected barrage of last year. But even for those in this happy situation, we all know that managing IT to an optimal state is the virtual equivalent of painting the Forth Bridge, a job that is never accomplished. (Or perhaps we could argue that it's more like the Ship of Theseus where none of the component parts are original. Discuss.)

Others aren't so fortunate. And last year they may well have seen revenues, profits and prospects fall off a cliff, so it's understandable that many cut back a bit or slammed the brakes on IT spend.

But if we accept that getting infrastructure, transformation and readiness to move fast are critical to the success of most companies this year and beyond, what can firms do to get to that state?

An emerging body of evidence suggests that we can benefit by studying the lessons of the immediate past.



By Martin Veitch, Editorial Director, IDG Connect

In 2020, according to my rapid analysis of analyses, maybe a quarter of companies cut back sharply on IT spend, a quarter cut back somewhat, a quarter stepped up somewhat and a quarter stepped up sharply. But more important than this is what they did with whatever budget available to them.

- Public cloud deployment, already going fast, went faster. The fastest, simplest route to deploying access-from-anywhere IT services had a formula that matched the needs of the crisis. CIOs doubled down on cloud services where they made sense and it's unlikely they will go back.
- Co-location and MSPs offered partnerships. Nobody will have wanted new outsiders in offices, but third-party data centres and managed services provided a halfway house to access skills and facilities in a way that was affordable and manageable. And again, this is likely to prove a sticky change.
- End-user computing was reinvented. With employees mostly at home, IT needed to re-engineer how they accessed critical applications through a mixture of cloud, streaming and other approaches.
- Everybody needed a hand. Organisations need tea and sympathy from IT vendors and some at least responded. By relaxing terms and conditions, adding more services and generally listening, we may have seen a change in the weather for IT vendor/buyer relationships that have often been uncomfortably abrasive.
- Classic on-prem strategies were relegated. Nobody wanted to jump through procurement hoops, spend on upfront hardware or commit to software licences. This doesn't mean that on-premises IT goes away but it does point to a further erosion of its importance.

- User support changed in surprising ways. Shorn of easy access to help desks and white-glove treatment, self-service kicked in as staff used Google and their own nous to fix issues. IT departments reported surprisingly low incident levels while line-of-business leaders reported often higher levels of productivity.

My view, and that of the consensus, is that the crisis measures will bleed into 2021 and for many years to come. Companies will invest in tactics that bring them business flexibility. They will minimise upfront spending in favour of short-term adaptability and look for solutions that buy them wiggle room – but also have extensibility if so needed. Goldman Sachs management may not agree, but the hybrid workforce operating from multiple locations is set to be the norm.

Just like 2020, 2021 will test CIOs' ingenuity, nimbleness and willingness to oppose business-as-usual tactics. There remain challenges, and data security and governance remain works in progress. But the tools and learnings are there to use the pandemic as a catalyst for a smarter approach to IT now that some of the old shibboleths are put to rest. Are you ready to bounce back?

Just like 2020, 2021 will test CIOs' ingenuity, nimbleness and willingness to oppose business-as-usual tactics.

Business will play a full part in the economic, but also human, recovery in the road that lies ahead of us. Shocked as we undoubtedly are, we need to rally and go again. Is IT ready to support and even lead?

One silver(ish) lining to the pandemonium has been that many CIOs I have spoken to said they found pockets of time to talk to peers, ask them about their experiences, swap war stories and discuss what has and hasn't worked for them.

Simplicity is the key

If there is a watchword in business IT in 2021 then I think it's going to be 'simplicity'.

One silver(ish) lining to the pandemonium has been that many CIOs I have spoken to said they found pockets of time to talk to peers, ask them about their experiences, swap war stories and discuss what has and hasn't worked for them. They've opened up and debated matters that they probably thought they would never get involved in: the importance (or otherwise) of working from offices; the security implications of home working; the mental health of staff and the importance of being able to simply stop and think.

Directly or indirectly, that's feeding into a groundswell that was already occurring: the demand for IT vendors to be transparent in their workings, to rationalise SKUs and come up with pricing schemes that deliver clear value.

You can see in HPE's Greenlake and Dell's Project Apex a recognition that vendor product lists and pricing schemes had gone out of control. There is a reckoning being had and it's pointing towards subscriptions and 'as a service' offerings that are based on solutions and customer needs.

The moral for vendors is an old chestnut but true: Keep It Simple, Stupid.

Public cloud platform choices

The sheer scale of cloud platforms is a modern phenomenon. AWS turned over more than \$45 billion for its last financial year, posting most of Amazon's profits too. That makes it a vast company in its own right but the fact that it's part of a company valued at north of \$1 trillion (a trillion dollars!) means it's not going to go away anytime soon.

We can say the same of Microsoft, Google and Alibaba, all of which have the untold riches to stay in the mega-cloud game for years and decades to come. In fact, we may not be so very far from seeing tech companies with market caps that surpass the value of annual GDP in individual large European countries. In 2021, I fully expect to see more companies place their bets and make strategic investments by placing more of their critical workloads in one or more of these bellwethers.

The wider implications of this are profound, but for smart CIOs it really boils down to understanding that flexibility and agility will be keywords to enabling a hybrid workforce.

The moral for vendors is an old chestnut but true: Keep It Simple, Stupid.

CTO view | The vital role organisational agility has to play in business



By Steve Dunne, EMEA staff writer

Technology and innovation played a key role in keeping many businesses operational during the COVID-19 pandemic. In this interview, Oliver McKenna, CTO, EMEA at Workday, discusses the impact of the cloud and the importance of agility on businesses as the world starts to spin again.





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If you can wrap your people connections with really good technology, you're going to win no matter what business you're in.

Oliver McKenna
CTO, EMEA at Workday

Can you start by telling us a bit about your background and how your career has developed?

I'm a software guy at heart; a computer science graduate more years ago than I care to say. I've always loved software and techy stuff, and I've worked in the financial services software industry or the people software industry throughout my career. I've been lucky to work with some great companies. I first got exposure to HR services when I worked on the Fidelity employer services platform. That was my first real experience of providing HR services to large companies and it was formative – we provided HR and payroll services to large companies, but it was challenging as each customer had a different service model and it was difficult to maintain.

Back in 2007, we heard of Workday and loved where the company was going – a cloud only, multi-tenant, configurable platform. Around this time, we bought HR Access – and I moved to a CIO role based in Paris. This was another great experience for me – and all the time I stayed in touch with the Workday executives sharing stories about where we were going. I remember having a certain envy of where Workday was heading!

How do you think technology leaders in the CIO/CTO role have coped with the pandemic, and what lessons have you learned personally?

It's remarkable, in many respects, how well people and companies have responded to the pandemic. Society needs a major pat on the back in terms of how well it has responded. Technology has been a phenomenal enabler of that if you think of the

millions of people that are working from home right now, and this has been relatively painless for most companies. Certainly, the technical infrastructure, cloud technology, mobile capability and the distributed solutions that companies had in place have proved to be the ace card in enabling remote working.

I believe that a flexible work model is going to be very important for people – and companies will want to support their employees while retaining a sense of identity and culture. I think important capabilities like innovation and brainstorming will always be easiest in a connected and together setting. I think people will get more flexibility and this new model will be a major benefit for companies and people alike.

Agility is seemingly the tech phrase du jour right now, but how do businesses and tech leaders make agility real and really get focused with their efforts to become more agile?

I had a great chat with two leaders from PwC last week, and we explored how they are looking at agility in their business. Workday has been rolled out to all of their employees worldwide – I think there are 158 different entities around the world, so it's a critical deployment for them. And like all companies, PwC wants to maximise its own agility. Agility to them is the ability to match people with needs in a particular marketplace. Customers are looking for particular skills and for particular roles. With over 400,000 people it's a logistical challenge to find the people who've got the required skills. And that's where Workday can help simplify and streamline this process.

I believe that a flexible work model is going to be very important for people – and companies will want to support their employees while retaining a sense of identity and culture.

But it's also important to look ahead to identify what skills are missing. What skills do we need to develop? How do we move forward? Agility in that sense, is very much about the workforce – the skills available, the ability to respond and how we align tasks and projects with the opportunities in the marketplace and the desires of our people.

How important is IT architecture for organisations when they're looking to transform their key systems?

It really is a critical component – and from my own experience – building the right architecture is extremely hard to do. The thing that Workday does, and good cloud solutions do, is that they give you this rich configurable solution that's standard, reliable, scalable and secure, but can be moulded to suit your needs. That's hugely powerful and very difficult to do. Not many vendors have got that right.

Good architecture means you have a fluid process engine. You have a built-in security model that moves with the business. You have mobile and desktop covered. You have always-on auditing. And, today, great architecture means you have all this within this one platform – enabling the various business functions like HR, learning, payroll, procurement, planning and of course finance. So that, to me, is what powerful architecture is.

I've heard you talk about how cloud isn't always an ROI or TCO conversation, but more about value. With that in mind, how do businesses get the most out of their investment in the cloud?

When you look at any leading organisation their business models are all really interconnected. I'm sure you've heard the old adage 'No man an island'. It's the same for companies – no company is an island anymore. We're very much interconnected in the modern world. Having that cloud architecture where you can plug and play, you

can achieve scale, you can be secure, you can have your own version, is absolutely essential. I really want to encourage CIOs to lean down that hill and make the step into the cloud if they haven't done so. To go and embrace it.

In many respects, it frees you from some of the things that you're currently doing if you're an on-premise company. If you're not a cloud company, you have to do all the things that we are doing. You do get some companies who approach it from a cost justification perspective. They say, 'We're going to eliminate X number of systems. We're going to increase our throughput by Y.' There are many stories of companies who have achieved phenomenal cost returns for moving to cloud – which is great – but that's only a very small part of the story. The big story is how does this position you as a business to become a serious player in your market tomorrow?

Thinking about digital transformation, how do organisations get started if they're late to the game?

There's two ways that I think of digital transformation. The first is internally focused – how my company and my team work together. Then there's digital transformation for our customers and how we service them. Those run in parallel but are quite distinct activities that companies need to solve to be a digitally-enabled company. Some companies start with the customer and work back into their employees, and others with the employees and work outwards to the customer. My own experience is to begin with your employees, provide them with a rich environment which helps them to see what's possible and reframes their mindset for how they service their customers.

The pandemic has only fuelled the appetite for consumers to consume services in a more digital fashion. I do think we need to keep the people touch though. It's important to have that human element, and if you can wrap your people connections with really good technology, you're going to win no matter what business you're in.

I'm sure you've heard the old adage 'No man an island'. It's the same for companies – no company is an island anymore. We're very much interconnected in the modern world.

CIO view | Veolia UK's push forward with digital acceleration



By Steve Dunne, EMEA staff writer

Like many organisations, the world did not stop spinning for waste, water and energy management company Veolia UK during the COVID-19 pandemic. In this interview, Stuart Stock, CIO at Veolia UK, tells me about the company's move to the cloud, its rapid digital acceleration and ambitious plans for machine learning and automation.

Can you start by telling us a little bit about your background and how you progressed into the role of CIO?

I'm Stuart Stock, Chief Information Officer for Veolia UK covering the UK and Ireland. I've been with Veolia UK for 18 years now. Actually, my work anniversary was on 3 March just gone. I've been here quite a long time. I started as an accountant, and I moved over to work on data and business intelligence before taking on a wider role in IT about 10 years ago. At the time I was responsible for IT for the whole of the waste division, and then we converged all of our divisions – energy, water and waste – into one Veolia UK business unit a few years ago. And that's when I took on the role of CIO.

During the COVID-19 pandemic, you have been able to push forward with digital acceleration. How do you see the shift towards digital during such a challenging period?

Without a doubt, it has definitely sped up the process of digital adoption. I think the fact that we can see consumer behaviour change even in our own home, under lockdown and wary of infection. We've switched to e-commerce for everything from grocery shopping to financial transactions – delivery

services are now the preferred choice over travelling to a store to pick something up. This has helped with the digital dexterity in our workforce too. We've seen our teams become more accepting of IT solutions and change. That's allowed us to really target some of the mundane processes that we have within a business and begin automating those processes with IT solutions to free up valuable time.

With valuable time freed up, our employees have more time to provide innovative solutions to our core services and help the world to combat things that affect us all like reducing carbon and combating climate change. I think this is a huge testament to where we've had that digital experience at home and we've taken it into the workplace. One thing I should mention too is, when we went live with Workday on 7 April, it marked the first time 9,000 of our employees will be using the Workday application to access their digital payslip. This is an amazing milestone for us as a company, and it'll help support our own drive on sustainability – eliminating paper where we've now got a digital solution.

How important is cloud computing and everything that it brings in helping organisations pivot to change and operate with more agility?

With valuable time freed up, our employees have more time to provide innovative solutions to our core services and help the world to combat things that affect us all like reducing carbon and combating climate change.

The cloud is absolutely fundamental and instrumental to our wider strategy. In 2018, we set off on a mission to transform the business, and it was a three-year plan that we put together; we termed it 'the digital summit'. Along the route to the digital summit, we set a milestone to move to the cloud and remediate all of our applications or our legacy applications to SaaS and PaaS type solutions. This vision was to allow our workforce the freedom to work securely anywhere, any time and on any device.

Obviously, we started this work quite early, before the pandemic. When the pandemic hit, unfortunately, we had a couple of legacy applications that were on-premise, and we had to wrap them into an app streaming service. These are the applications that Workday is replacing when we've rolled that out for both finance and HR, so they'll be gone. Following on from this, later this year, we'll be able to close down our data centre. So the cloud was a key part of our success journey. When the lockdown was announced

and the work-from-home instructions were set by the government as well, on that same day we were about to send all 4,000 of our workers home, including our customer service teams and the telephone set-up as well. That in itself demonstrates how agile you can be if you're a cloud-ready business.

The CIO role is constantly evolving in line with the changing needs of the business. How has your role shifted over the last few years and how do you see it evolving in the future?

I'd say in terms of what we're doing differently today, I think we've incorporated this culture of 'learn it all' across the team. So, IT was, or it was within Veolia UK, very much the people used to have a 'know it all' sort of philosophy. With the cloud and SaaS, PaaS products and solutions, we need to have that continuous learning approach, and that's why we brought this 'learn it all' approach into the team. I think, for me, the technology and

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[Our] vision was to allow our workforce the freedom to work securely anywhere, any time and on any device.

Stuart Stock, CIO at Veolia UK

capabilities of the team are really at the stage where – it's a bit cliché, but we're at that stage where anything is possible. And I would say, because of that, prioritisation is probably my biggest challenge I have to overcome on a daily basis. That's because we're a team that's already central to business innovation and I want to build on this to allow the team's ambitions to grow with the business too. But obviously, with that, the greatest challenge we all face as CIOs is resources in terms of the people and funding big projects. With constant collaboration and cooperation from the business, I always have to make sure we're supporting the right projects all the time, to enable the best possible outcome.

In terms of how the role is developing, I think keeping the lights on is becoming easier, and therefore, we can turn ourselves to innovation or turn our attention to innovative ideas. This means, again, as a department, we can become really embedded within operations and therefore equally embedded in the customer's experience. We're involved in projects now where the team is blended between IT and operations. And I think going forward, there'll be a greater crossover of skills on both sides which will allow us to move faster on projects because everyone will have that joint understanding and responsibility.

C-suite collaboration and partnerships with other leaders always seems to come up as a high priority when we talk to CIOs. Do you see collaboration between IT and other areas of the business increasing and how can you be a good partner?

We have a team that I think already has a very close working relationship with my C-suite colleagues. What we did was create a digital transformation team that's dedicated to the different divisions we have within the business. They're embedded within operations, and they work on digital solutions and engagement directly with operational staff and our customers and clients as well.

I think it's important as an IT department to have the same vision as the business, and therefore, we've aligned our own objectives with our operational colleagues. For example, the team behind our online sales tool that we've gone live with over the last few months: we've set them exactly the same sales targets as the marketing department have. So, aligning those goals and objectives is key to ensure everyone is working towards the same vision, and it helps with that prioritisation of projects I was talking about earlier as well.

The topic of remote working and the model businesses will adopt is a hot subject right now. How do you see that working out in the future?

I think it'll be a pure hybrid. There's a time and a place for face-to-face meetings and going into the office, and I think it's important to keep that dynamic – not just for social interaction, but those situations where you need to set up a war room for a last-minute push on a project or you need an innovation day with your team to brainstorm and generate new ideas together. I don't think these scenarios are as impactful when they're done digitally. If you combine occasional collaborative office work with a work-from-home policy, I think that's the most compelling situation for our employees and potential employees. As a business you'd be at a disadvantage if you don't have that offering for the workforce going forward, people want that work-life balance.

How do you see the emergence of automation and machine learning now they're starting to move into mainstream business? And how are they going to impact IT and the broader business in the future?

I think both trends have been in the making for longer than the pandemic. And for us, automation and machine learning are some of the areas where we want, as I said earlier, to remove those non-value-adding

If you combine occasional collaborative office work with a work-from-home policy, I think that's the most compelling situation for our employees and potential employees.

activities that take up the critical time of our employees. This allows for our teams to be making more strategic business decisions. Our employees really are the experts, and by automating everyday tasks we're freeing time up for ambition – to really drive forward more strategic decisions. And this is where we see the biggest impact and the biggest positive change. Essentially you're making their work experience a richer experience, and that's key for retention and attraction as well. We have a number of different examples of machine learning models we've built here with our data science team. One of the most effective models has been the collection of data from the 50 different data sets within our systems into a machine learning model that then allows us to calculate a customer's propensity score. And any sales rep or customer service agent can see that score and build on a customer's experience.

What are the key things that you're focusing on in the post-pandemic period that we're about to enter?

I think cybersecurity is always a priority for obvious reasons, and I'm sure that's the same for every CIO out there, so I don't need to elaborate on that too much. In terms of the to-do list, I'm at the point where I want to continue our automation journey – building up that intellectual property I was talking about earlier with more machine learning models to differentiate ourselves from the competition. I think as part of that, the expansion and the capture of additional data into our own data platform is another key focus for us this year and in the future. That will help us, as an organisation, to make better decisions with more insight into issues we're already aware of or closely looking at. That's particularly useful for an organisation like us. We have 14,000 employees. We're a company that spans across energy, water and waste. We touch millions of homes across the UK with our services. Our operational data is critical in helping us build that wider picture of all of our solutions and services. The final milestone that I am so keen to achieve this year and tick off the list is closing down our colocation data centre so we're fully public cloud. This will allow us to continue to become more agile and innovative, and deliver more solutions to our customers and employees so we can really drive that vision and purpose to being the leader in ecological transformation.

One of the most effective models has been the collection of data from the 50 different data sets within our systems into a machine learning model that then allows us to calculate a customer's propensity score.



“The final milestone that I am so keen to achieve this year and tick off the list is closing down our colocation data centre so we're fully public cloud.”

Stuart Stock, CIO at Veolia UK

IT & Tech view | COVID-19 and digital transformation at Pick n Pay



By Christina Johnson, EMEA Staff Writer

The past year has brought about unexpected change for us all. And for businesses, it has reinforced the need to take a digital-first approach if they are to succeed – now and in the future. In this interview, Chris Shortt, Head of Information and Technology at Pick n Pay, discusses the digital transformation journey the South African retailer is on.

First off, can you tell us a bit about how COVID-19 has changed the way your business operates?

From an organisational perspective, Pick n Pay is very distributed. And the contact points with our customers are varied – ranging from online all the way through to our supermarkets. Our biggest challenge when COVID-19 hit was that our disaster recovery approach was focused around how we could keep our people together physically, which was obviously impossible in the pandemic. So we had to completely rethink how we operate. And because of this, we had to accelerate the adoption of working in a remote, decentralised and disparate way.

How did this change impact how your people work?

From my team's perspective, a big pressure point for us has been that what we do has become even more important. This is because even the 'support functions' as we call them are relying on technology to operate. Suddenly, applications are critical because people can't speak to anyone in person. And now that the senior leadership are working on Zoom every day, they want to know they can rely on it at any time of the day to keep the business going. This was quite a big change

for us, and it really accelerated my team's understanding of what service level means in terms of user experience.

You've spoken a bit about the effect on employees. In terms of training, what's changed?

We used to have a traditional training model where we would bring distributed staff to one location, put them in a classroom and teach them the compliance elements of operating a store, the ways you merchandise a store, how you manufacture an in-store bakery etc. But with this being impossible, how do you maintain compliance? How do you ensure people are trained properly? We really had to rethink the way we approached things.

And funnily enough, if I reflect on some of the recent remote training we've done, we've actually had a much better outcome because people are almost more attentive. They're less distracted because they haven't had to go out of their way to travel to the head office. We've seen better outcomes because people are more engaged. We're also trying to transform our training content so it's being made for digital first, and then made available to reference and re-use anywhere, at any time, much more easily. We've then also got the full traceability of whether people have completed the courses and certifications.

The most powerful thing that's transpired is the opportunity for the C-level executives to have direct, hands-on experience of utilising digital tools to operate.

Now for a lot of organisations this is old news. But for us it's relatively new, and is part of our digital journey. We've found that the ability to engage our stakeholders all the time is so much stronger now because we're working virtually. We can run workshops for so many more people because we don't have physical limitations.

In terms of the C-Suite, what are the changes you've seen take place?

I think the most powerful thing that's transpired is the opportunity for the C-level executives to have direct, hands-on experience of utilising digital tools to operate. This has probably made the biggest impact because when you're working from home, you're forced to use the tools and technology available because no one's there to help you. This has led to growing curiosity and interest in the potential to harness technology in different ways.

The other thing that I think has changed quite substantially is the speed at which information is being consumed. The executives are now accessing information digitally – and because they can access it quickly, different decisions are being made.

You've touched on how the technology has changed the way people at Pick n Pay work. How has it changed the way you interact with your customers?

In our business we use consumer work groups and research groups. And we're now in a place where we can get improved and more detailed insight from customers by using platforms such as Zoom. We use third-party organisations to facilitate the process, but instead of receiving an email survey reply, we can actually have a Zoom session facilitated by a research organisation, with some of our team listening in on the process. This allows us to have a much more direct connection with our customers who are telling us exactly what we're doing well and what we're not. This has really helped to quickly guide us on the areas we need to be focusing on.

Have you seen any impact on productivity as a result of this digital acceleration?

In parts of the organisation where they've been working with an outcomes-based management method for a long time, we've definitely seen a rise in productivity – easily by 15 to 20 percent. And in our stores, we've also seen productivity substantially improve. I think this comes from the sheer willpower of South Africans. We're all facing the same challenges, and I think our people in stores are very resolute in tackling them together.

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Chris Shortt
Head of Information and Technology, Pick n Pay



Celebrating the 40-year anniversary of the Physics of Computation Conference

The QC40: Physics of Computation Conference looked back at the past 40 years of quantum computing progress, the state of the field today, and its future.

Forty years ago, a ragtag group of 50 thinkers arranged themselves for a photo on the lawn of MIT's Endicott House. Few at the Physics of Computation Conference, jointly organized by MIT and IBM, thought they were making history in 1981. None had the conference's subject as their day job. At the time physics and computing were viewed as largely separate, and their overlap was mainly the subject of speculation.

Today, that conference holds more weight than any of us could have imagined. Perhaps due to the gravitas of its sponsoring institutions, and the fame of some of the attendees, it was arguably the birthplace of physics of computing, and especially the now-burgeoning field of quantum computing, as a serious subject worthy of a textbook or university course.

Some of the attendees had long been interested in physical limits of computing, including MIT's Ed Fredkin and Tom Toffoli, and IBM's Rolf Landauer, John Cocke, Gregory Chaitin, and me, Charlie Bennett (not in the conference photo because I took it) who had studied topics like the evolution of cellular automata, the energy cost of information processing, and whether the universe itself could be explained with the principles of computing. These conversations attracted some of the world's most renowned thinkers, like Freeman Dyson, John Wheeler, and

Richard Feynman to the conference at the stately Endicott House mansion, where we were as excited about the content as we were worried that one of us may accidentally knock an oil painting off of a wall during our talks.

At the time, quantum mechanics, though essential to the design of hardware devices such as transistors, was not viewed as having any fundamental relation to computation itself. Instead, it was seen as a nuisance, a source of noise, causing tiny devices to behave less reliably than their larger cousins. However, some physicists, like Stephen Wiesner and Alexander Holevo, had already begun to think about positive uses of quantum effects in cryptography and what it might mean to replace classical information with quantum information in a communication channel. These ideas took hold slowly as more physicists began thinking about them; David Deutsch, for example, theorized that the quantum computer could be a useful model of physics overall, while Feynman realized that it would take exponential classical resources to simulate the quantum mathematics underlying our universe's behavior.

The Physics of Computation Conference was a foundational forum where scientists were discussing these threads, and some of its attendees didn't take it as seriously as you may think, at the time. But looking back on it, this conference now serves as an anchor point for



By Charles H. Bennett, IBM Fellow and Olivia Lanes, Quantum Researcher and Education Developer at IBM Quantum



scientists and institutions looking for a history and legitimacy to this field. It was a dedicated time and place to discuss the intersection of physics and computing, helping to braid these threads together. And it was at this conference where Feynman uttered his now-famous quote: "Nature isn't classical, dammit, and if you want to make a simulation of nature, you'd better make it quantum mechanical, and by golly it's a wonderful problem, because it doesn't look so easy."

Forty years later

These conversations slowly matured — and were perhaps still in the realm of shower musings — until 1994, when Peter Shor debuted his namesake algorithm, which demonstrated that not only could quantum computers be useful in simulating physics, but they could solve certain hard problems exponentially faster than classical computers could. The field has since exploded.

Today, research institutions, universities, and companies around the world have devoted resources to building quantum hardware and researching new algorithms. We may soon see quantum devices with advantages over classical computers when tackling the same problem. Federal governments have long since taken notice, devoting money and writing roadmaps to ensure that their countries have developed quantum expertise of their own.

Now that the groundwork has been laid, we're in the position that we can think about quantum computers as technology, not just a science fiction experiment. Researchers are presenting results pushing the limits of these devices and finding new ways that they might be used to solve problems that are not only mathematically interesting but useful, providing benefits to humanity.

However, this field faces a dearth of traditionally underrepresented groups today, such as women, Black people, and LGBTQ+ people. If we'd like to see this technology deliver the most benefits and cause the least harm, we must include the most diverse set of voices as we build up the quantum community. We're optimistic about the efforts to democratize access to these devices, like the global communities that have developed around programming quantum computers, and educational initiatives that prioritize bringing quantum education to the widest possible audiences. Looking into the future, we hope that a photo of the quantum computing community will include a lot more people — and a lot more diversity — than the 1981 photo.

The QC40: Physics of Computation Conference took place on May 6, 2021 and took a look back at the past 40 years of progress, reviewed the state of the field, and even looked into the future to imagine where we'd like this field to go.

Forty years ago, a ragtag group of 50 thinkers arranged themselves for a photo on the lawn of MIT's Endicott House.

Tech-Enabled Business Strategy: Engineered for Agility



In a recent Deloitte article Rich Nanda, U.S. Strategy offering leader, and Tom Schoenwaelder, U.S. Strategic Growth Transformation market offering leader, Deloitte Consulting LLP, looked at the importance of technology in identifying new competitive advantages to deploy—and threats to monitor. Here, we summarise this key trend, looking at how tech drives agility, enabling businesses to meet disruption and uncertainty head on.

Today's volatile business environment calls for an integrated corporate and technology strategy that supports organisational nimbleness, scalability, and stability. And as business strategy and technology strategy increasingly intertwine, many corporate executives are finding their organisation's past technology choices are limiting their strategic options and business agility. To resolve these limitations, strategists can look to collaborate with tech leaders to confirm that the organisation's critical technologies support the organisational strategy—and that the organisation's technologists have the right framework and understanding of the corporate strategy to make their day-to-day technology decisions.

In Deloitte's 2020 Chief Strategy Officer Survey (CSO), most participants (70%) rated disruptive growth as critical for their companies' success, but only 13% are

confident their company can deliver on this strategic priority. Even though most responders say they are seeking disruptive growth, 71% report spending more than three months on a single round of strategy development. Nearly half (45%) refresh their strategy annually, or even less frequently: every two years (23%) or three years (22%). These statistics indicate that many companies have a lot of work ahead to become more strategically agile. But agile strategy development and execution doesn't happen in a vacuum—to generate effective results, organisations need the following foundational elements in place:

Empowered strategy function. Whether it's the CEO, CSO, or other executive, an empowered leader is critical to effective strategy development and execution. In collaboration with the CIO, the strategy leader can help expand and shape the vision of other

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executive leaders and board members. As one executive from a leading oil and gas company said, "The CSO needs to challenge long-held views and get our fellow executives to think about a market environment that is different from the existing one."

Tech-savvy C-suite. C-suite executives and board members should have a broad understanding of the critical technologies the company needs to gain competitive advantage and to build resilience against disruption. Leaders need to be supportive of investing in a portfolio of technology investments, from proofs of concept that test emerging technologies to major implementations of proven platforms. Moreover, executives can help challenge the critical assumptions of those implementing the technology to help make sure implementation will drive value for the enterprise.

Business-savvy tech leaders. Likewise, IT leaders and technologists can engage in strategy development processes and education that helps them broadly understand the business and its strategic objectives. As strategic partners, tech leaders can help strategy and business leaders identify and explore emerging technologies that support the strategic vision. In fact, Deloitte research shows that 40% of CEOs said their CIO or tech leader will be the key driver of business strategy—more than the CFO, COO, and CMO combined.

Aligned technology and partners. Effective organisations choose their technology platforms and ecosystem partners carefully, aligning their choices and implementation decisions with their strategic goals. When selecting important ecosystem partners, evaluate their long-term motives and agendas to understand whether their objectives and aspirations align with yours. In a worst-case scenario, a platform partner could become a competitive threat after

they "learn" your industry.

Collaborative list of strategic assumptions. Early in the strategy development process, strategists, tech leaders, and ecosystem partners can explore and challenge the assumptions for a tech-enabled strategy to be effective. Consider holding the discussion in a neutral environment such as a workshop, where a range of answers are encouraged and cataloged to be used later to flag leading indicators of the strategy's success or failure.

Agile funding. Executing on agile strategies demands a flexible process for planning and funding the technology investments required to implement strategies.

As leaders consider a wider range of variables and future scenarios, tech-enabled strategy platforms may help strategists think more expansively and precisely about the wide range of future possibilities. Equipped with advanced analytics, automation, and AI capabilities, these platforms can also help leaders gain insight into seemingly unrelated occurrences that can enable smarter strategic choices on a continual basis by identifying driving forces, informing strategic decisions, and monitoring outcomes.

Strategy development is not a one-and-done exercise but, rather, an ongoing, cyclical process. While accelerating technology is a strategic complicator, executives can deploy it to simplify and accelerate smart strategy development and execution. Leading organisations are engineering their strategic function to be more agile, scalable, and stable, giving them an array of options in their back pocket for whatever the future holds.

You can read the original article and learn more about Deloitte here: <https://deloitte.wsj.com/cio/2021/01/27/tech-enabled-business-strategy-engineered-for-agility/>

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We're also seeing a closer collaboration of industries. For instance, the financial services industry is learning from gaming and social media to help engage people with their money, and this overlap is going to be very interesting.

Gemma Godfrey
 Founder and CEO, Moo.la

The top tech trends for 2021 and beyond



By Christina Johnson,
 EMEA Staff Writer

We recently brought together some of the industry's best and brightest minds to discuss disruptive tech, emerging innovation and future trends. Hosted by tech journalist Georgie Barrat, here are some of the highlights from the panel with Gemma Godfrey, Founder and CEO of fintech company Moo.la, Inma Martinez, Digital Scientist, and David Rowan, Founding Editor-In-Chief of WIRED UK magazine.



Q. Where do you think the next big tech revolution will come from?

Gemma: Currently, we're emerging out of this era for innovation for innovation's sake and moving into purpose-driven tech. Especially because of the pandemic, there's going to be a lot more focus on the healthcare sector, as well as the environmental sector. We're also seeing a closer collaboration of industries. For instance, the financial services industry is learning from gaming and social media to help engage people with their money, and this overlap is going to be very interesting. So we're moving from an era of 'let's create something for its own sake', to 'how can we use data so that we have a positive change?'



David: I'm working with a lot of health tech entrepreneurs right now and what's obsessing me is how they're using code to alter biology. We're getting data from DNA and able to edit DNA to create new outcomes and opportunities. While in food, you can use biology to create plant-molecule-based food substitutes for meat. I'm excited about all kinds of things, but at the moment there seems to be a huge opportunity in taking natural biology to help solve some of our big problems.



Inma: In the next 10 years we're going to see a consolidation of the disruption that started a decade ago. 2010 was the era of digital disruption and transformation, and between 2020–2030 the digital society will consolidate across all sectors and societal structures. For me, the three biggest areas are going to be automotive, smart cities – the way we manage cities and the lives of people – which will form the new Green Economy together with the energy sector and healthcare. Healthcare will have the biggest revolution because AI will become an integral part of its processes.

Q. In all this change, how do we ensure tech remains human-centric? Especially when it comes to businesses and how everyone is now working remotely?

Gemma: This is such an important question because people's personalities differ – for example, introverts and extroverts. Some companies have gone from one extreme of putting a lot of focus on the face-to-face, to now everyone working from home. But how do we make sure the people who want to have that human element and interaction still get it? And how do we use tech to enable it? I don't have the answer to this because it's one of the biggest challenges we face coming out of the pandemic. In terms of practical things you can do to build the right business and build the right tech, there's this big ethos around testing before you build. Make sure you put your customers and people at the centre. And think about how you can harness data to understand what people want and build things around different personalities.

David: Talent is diverse, and real innovation happens when you have diversity of thinking. When you've got people who come at a problem with a different set of expectations and understandings. And one of my real worries at the moment is that we're moving to a world where there's a risk of similar decision making. And this isn't just in hiring people, but in all sorts of decisions. There are hierarchies that have a particular way of looking at the world, but there's a risk long-term that these organisations will continue to think in a homogenous way. And innovation and really new approaches, such as autonomous cars or synthetic biology, typically come from outside the big organisations. So we need to ensure these small teams of talent, wherever they are, have access to markets and funding.

Inma: I spent close to 15 years working in start-ups. The way we approached hiring people and keeping people happy was very different to traditional corporations, something that the current pandemic has proven that can be transferable to larger organisations and SMEs as a modus operandi. I always say that the most important thing for this decade is not brand promise, but purpose. People want to know why they work where they do and customers demand that corporations deliver value to society beyond the products and services that they sell. I think the biggest opportunity is that, since tech now is affordable and there is a plethora of apps to help organisations work more efficiently and cohesively, we need to ask ourselves: what kind of purpose and culture do we want to instil in our teams so they'll be resilient, enthusiastic and collaborative? Try to create a team mentality that's humanistic and focuses on the emotional intelligence of people. The 'EQ' rather than the 'IQ' of people. Remember, SMS was never meant for people to use to communicate with each other. In the 1990s, it was for the mobile operator to tell you there was no network coverage. So let's ensure we use tech in creative ways that make it work for us.

Q. How do we bring industries, universities, regulators and start-ups together so they innovate together?

Gemma: Companies like Dell are great examples of organisations that are working closely with universities. Back in my day it used to be: 'Do you want to be a doctor, lawyer or accountant?' But because of the pace of innovation now, and how quickly companies change, the skills they need are constantly evolving. So, to shape the workforce they need, companies are collaborating with universities to meet their skillset requirements in three years' time. Collaboration and opening up the lines of communication is essential.

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Don't work in silos – bring someone in from a different part of the company and let them take part. Normally that person will ask the most brilliant questions – the unexpected, off-the-wall stuff that will make the whole group reconsider new perspectives and assumptions.

Inma Martinez
Digital Scientist

Q. How important are physical spaces in getting this cross fertilisation and amalgamation of ideas going on?

David: It comes down to mixing people up so they have unexpected conversations and can learn from different people. And that's really hard to do when you're on video. At every conference I've been to, I've learnt something unexpected in the queue for coffee or while sharing a taxi. So how do we do this? Partly, we start saying yes to invites that are unfamiliar or uncomfortable. If you're a CIO and you go to a human rights conference, you learn all sorts of new things about tech. I go to a conference every year in Oslo, and five years ago I learnt they were using an encrypted messaging software called Signal. And what's happening at the moment? People are moving to Signal because they are concerned about their privacy. I also learned that activists were using Bitcoin because they couldn't use banking systems if they were in Venezuela – and now that's gone mainstream. So I think it's really interesting to challenge what you think is your specialism and mix with people in the arts world or the science world. You'll start to understand their problems, and how you can help them.

Inma: I always encourage people to join other projects so that they can shadow other teams to see what can be learned from them. I used to hire lots of students from cognitive neuroscience because I realised they were building algorithms to see how the human brain operates. And I was doing the same for machines. So I wanted to know where I could transfer biological cognition into machine intelligence, and it has proven to be one of the biggest advances in Deep Learning. Don't work in silos – bring someone in from a different part of the company and let them take part. Normally that person will ask the most brilliant questions – the unexpected, off-the-wall stuff that will make the whole group reconsider new perspectives and assumptions.

Q. How will tech help us make a positive impact on the planet?

Gemma: There was one start-up I was advising, and they measured the impact on the environment of the food you buy – from farm to fork. In order for us as consumers to make better decisions, the data needs to be captured and it previously hadn't been at all. But this helps us make better decisions based on the environmental impact of the food we buy.

David: Once you have visibility of data, you can start to change your behaviour. And once you can measure the climate output of your business or your home, and see where there's waste or loss, that's when you can start to make changes. There are start-ups going into companies and showing them the dashboards and data, and enabling better behaviour.

Inma: Utilise satellite data. Many companies are building sustainability programmes and getting free data that comes out of the European satellite Copernicus. They have done amazing projects with universities that have detected human trafficking or where people were dumping toxic waste. So sometimes data can be part of sustainability programmes and create social good from free data that comes out of our satellites.

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David Rowan
Founding Editor-In-Chief, WIRED UK magazine

Global study: The digital acceleration imperative



By Josh Krist, Staff Writer

As the world recovers from a pandemic, executives we surveyed are already reflecting on how to protect their companies from future crises. For many, accelerating digital growth is the number one change that will improve their organisation's resilience.

In business, the distinction between fast and slow responders can be subtle. For example, just small differences in key behaviours made a big difference when it came to nimbly reacting to the once-in-a-century global health crisis. We highlighted this finding in our last blog post on the 'Organisational agility: The roadmap to digital acceleration' report.

After further analysis and conversations with companies and leaders across business and academia, one thing is very clear:

Digital transformation has become digital acceleration. Or, as our CTO Jim Stratton recently wrote: "When we look back on 2020, we'll likely regard it as the year that digital transformation reached escape velocity... Technology evaluations and implementations that previously took months or years to complete were compressed down to weeks, if not days, in many cases."

Because digital acceleration is the new business imperative, we're sharing a key section of our global study and report based on 1,024 respondents (the C-suite and their direct reports), as well as 15 qualitative interviews.

The digital acceleration imperative

There is now no doubt about it: digital transformation is critical for business survival. Against 2020's backdrop of economic, geopolitical and social uncertainty, 36% of firms now expect that three-quarters or more of their revenue will come from digital within three years. This revenue expectation has tripled between June 2019 and July 2020.

While the path to recovery is anticipated to be a long one, the executives surveyed are already reflecting on how to protect their firms from future crises. One-third (32%) say that accelerating digital growth – whether by increasing digital revenue streams or advancing digital transformation – is the number one change that will improve their organisation's resilience in the event of a future crisis. This is followed closely by increased investment in technology to augment the workforce (30%) and investment in cloud technology (27%)

36% of firms now expect that three-quarters or more of their revenue will come from digital within three years.



The research also points to a link between the use of smart technologies, such as artificial intelligence, machine learning and robotic process automation, and the growth of digital revenue streams. The 64% of organisations that report some progress deploying smart technologies are twice as likely to derive 50% or more of their revenue from digital than those that have yet to commence deployment.

But, as one of the experts in the qualitative portion of the study warned, technology can't always fix underlying problems. "Robotic process automation is becoming popular. To me that's quite scary because it's going to string together old legacy platforms to make organisations think they have sped up," says agile expert, business coach and author Fin Goulding, "when they are simply pushing digital transformation down the road by a couple of years. That could prove dangerous. The core platform is the issue – not the fact that you can do it faster now – and that's really what needs addressing."

COVID-19 cements the case for digital acceleration

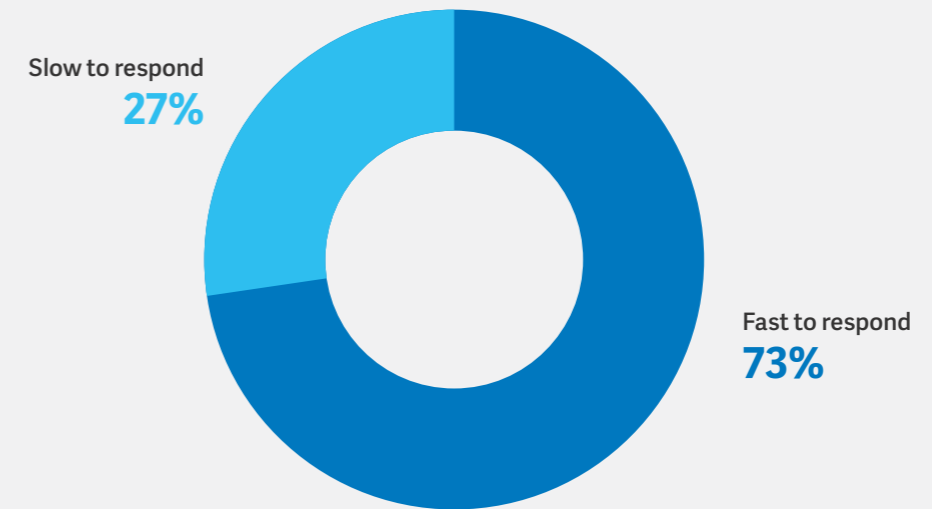
As organisations flex in a bid to future-proof their revenue streams, operations and people throughout the COVID-19 pandemic and beyond, the research illustrates the importance of accelerating digital transformation.

We asked firms whether they were equipped to respond to the COVID-19 pandemic at speed and scale. Proving that necessity is the mother of (re)invention, a large majority (73%) say they were equipped to respond fast when the pandemic hit. Throughout this report, we call these businesses the 'fast responders'. We call the remaining firms, which say they were slow to respond to the pandemic at speed and scale, the 'slow responders'. This report shows that these fast responders reveal higher levels of progress in all areas of agility covered by our 2020 study – as well as higher digital revenue growth.

64% of organisations that report some progress deploying smart technologies are twice as likely to derive 50% or more of their revenue from digital than those that have yet to commence deployment.



Which best describes the responses of your organisation to the COVID-19 pandemic and its ongoing impact?



What do these responses to the pandemic mean in practice? For some, it has vindicated their efforts to become more agile. "Our organisation was absolutely ready, which was the first big benefit of being agile at this point in time: to be up and running at full throttle working from home," says Michele Ungaro, Chief Development Officer at global professional services firm Aon.

For others, the pandemic has reinforced the need to execute on their digital transformation plans faster than they had anticipated, echoing the survey result around digital acceleration. "We were already in the works to go completely digital, but we had to shift and make different decisions based on what COVID-19 looks like moving forward," says the Regional Vice President of Operations at one multinational hospitality group. "We are moving faster, and that's where our efforts are focused – on making a digital world across our hotels a reality sooner rather than later."

The research shows that this hospitality group is not alone. In 2020, it's clear that businesses need to be moving at speed. More than three-quarters of respondents (77%) say that their firm is fast to act when technology investments fail to meet expectations, up from 70% in 2019. And 60% say that their organisation has removed bureaucratic processes that slow decision-making, up from 53% in 2019.

And for others still, there's nothing like shared adversity to strengthen the lines of communication. Paul Wright, CIO at Accuride, says, "If we can stay better connected with our customers, if we can respond better to their needs, if we can stay connected with our suppliers and maintain our relationships with them in really difficult times, then that should give us a competitive advantage in the future."

But for many firms, there is still a way to go. Read the rest of the report to learn how firms are unlocking organisational agility at scale, the stumbling blocks that are hampering progress for many, and where opportunities lie for future growth.

The road ahead for technology policy

Even as we recover from a difficult 2020, the world will never be the same. Jim Shaughnessy shares thoughts on five key technology policy challenges and opportunities in 2021 and beyond, ranging from workforce development to social justice.

2020 was a most difficult year. The COVID-19 pandemic and the accompanying social and economic crises impacted us all. While new vaccines provide hope that life will head back toward a pre-pandemic level of stability, the world will never be the same, as many social, technological and business trends were accelerated by last year's events.

This is unquestionably true as it relates to technology's impact on society and efforts to steer technology's influence through public policy. In the U.S., the Biden administration has a host of priorities that relate to the role of technology. And the recent EU initiative proposing a path forward on trans-Atlantic relations shows other governments are grappling with similar questions, while underscoring the importance of the rules of the road being compatible across borders. As we look ahead, I want to share some thoughts on key technology policy challenges and the opportunities in front of us.

Workforce development and talent

The pandemic and technology intersect acutely in the area of workforce development. Moving forward, more people will be working remotely, even after widespread vaccination. Technology has and will continue to play an important role in that transition.

But the pandemic has also accelerated a strong trend toward demand for new skills. Some of this is due to the emergence of new jobs that leverage technological innovations, but we also see increased need for new skills in non-digital roles.

In order to create economic opportunity for all in our changing world, we need to shift to a skills-based approach to talent instead of one based on pedigree. At Workday, we're doing our part to help businesses transition to a skills-based model, from our participation in the Markle Foundation's



By Jim Shaughnessy,
Executive Vice President,
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Rework America Alliance and the Business Roundtable's skills-based initiative, to Workday Talent Marketplace and our product offerings based on Workday Skills Cloud. And through our Tech for Good programme, we are leveraging Workday technology for societal impact through our first-of-its-kind partnership with the non-profit organisation Opportunity@Work. Using our Skills Cloud technology, Opportunity@Work is doing two main things – standardising its skills library to help applicants better demonstrate the skills they possess, and suggesting relevant skills for job postings to help employers better describe the skills they need. This all aids its mission to better match talent to opportunity.

We've published a whitepaper detailing how companies and governments can work together to enable this new world. From a policy perspective, it's important that governments take steps to foster this increasingly critical shift by improving workforce data collection and analysis and facilitating open data infrastructures. Our Co-Founder and Co-CEO Aneel Bhusri, and our General Manager for Talent Optimisation David Somers, recently wrote about how businesses and governments can work more closely together in this area. In addition, we need to create incentives for standardised and reliable credentialing of skills and experiences, and also support training and skills acquisition programmes that help prepare workers for whatever the future holds.

In order to create economic opportunity for all in our changing world, we need to shift to a skills-based approach to talent instead of one based on pedigree.

Artificial intelligence and machine learning

The increased use of artificial intelligence (AI) and machine learning (ML) are helping drive this skills transformation, but expanded application of these technologies – in everything from self-driving cars to receipt scanning – has led to calls for regulation on both sides of the Atlantic. We believe that thoughtful and effective regulation is essential in this area. AI and ML in the enterprise help make better predictions, which when combined with human judgment lead to better decisions. But making the benefits of AI widely available requires trust, and foundational to that trust is minimising potential harms. And that can be best achieved via regulation that requires AI developers to adopt processes designed to build trustworthy AI products. We believe smart AI policy will be essential in maintaining public trust, which is a cornerstone of innovating with any emerging technology.

Privacy

This increased reliance on technology makes protecting personal data even more critical. Data is the lifeblood of modern technology, especially AI and ML, and people will be reluctant to adopt new innovations if they lack confidence that their privacy rights are protected. At Workday, privacy is core to everything we do, and we have a long history of providing strong privacy protections that enable our customers to meet their privacy obligations.

It should be a top priority for the Biden administration and the new Congress to promote trust by enacting legislation with strong privacy protections that are interoperable with other countries' laws. The timing is ideal, with Australia and Canada revamping their privacy efforts and recent legislation in New Zealand and the EU.

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Cross-border data flows

Of equal importance is ensuring continued international data flows. While the European Court of Justice recently struck down the Privacy Shield, which provided a framework for personal data transfers from the EU to the U.S., other means for trans-Atlantic data flows remain. In the long run, though, a successor to Privacy Shield offers the best bet for long-term stability for data flows. The U.S. and the EU are already working together on such a framework, but reaching agreement will require compromises and good will on both sides, as well as a recognition that while our legal systems are different, we share a common set of core values.

Social justice

The social justice protests we saw around the world this past summer sparked calls for action to drive meaningful change and increased recognition of the impact of persistent racism in society. At Workday, we have responded through our own company commitments and intentional investments to create more equitable workplaces and communities for all. But the government must act too by, among other things, enabling greater economic and educational opportunities for underserved communities, returning to a rational approach to immigration, and increasing access to voting.

While the new U.S administration and policymakers around the globe will be taking on a lot from a policy perspective this year, we think it's important to recognise the opportunity at hand to enhance the positive impact of technology in society. By coming together with regulations that will help enable innovation in a responsible way, we can accomplish great things.

AI and ML in the enterprise help make better predictions, which when combined with human judgment lead to better decisions.



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