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FUTURE of WORK

A revolution is changing how we work

Rapid change, driven by advancing technology and the 'march of the robots', is accelerating to revolutionise how we spend our working lives

◆ OVERVIEW

● ALEC MARSH

"It was a bright cold day in April, and the clocks were striking thirteen." The opening line of George Orwell's great novel *1984* sets up a cautionary tale of how the future could look. In its way, what we're confronting in 2020 is every bit as chilling, but it is also an exciting time of opportunity.

Yet, just as the clocks "were striking thirteen", there could be alarming changes at work in the name of progress.

"Within the next five years, 20 per cent of all the jobs that exist today will have been automated away," claims futurologist Rohit Talwar. "By ten years that could be at least 50 per cent and by 20 years, 80 per cent."

And it's not just scary trousers time for the worker bees, either; businesses have got to move fast, too. "If you look at Fortune 500, there's an awful lot of dead men walking," cautions Mr Talwar, who has worked with BAE Systems, DHL, PwC, Shell and others.

And the same goes for their chief executives, 70 per cent of whom, he predicts, will not be in post come January 1, 2020. Because either they'll be gone – or their businesses will.

At the heart of this change are technology and the advance of artificial intelligence (AI), which will eradicate the need for millions of back-office staff and knowledge workers, including even doctors, just as advances in telephony eliminated switchboard operators from Sidney to Seattle over the last 15 years.

The AI doctor might not have the same bedside manner, but it'll diagnose just as accurately as the human variety – maybe even better – and it'll work 24 hours a day, seven days a week, without holiday, sick leave or pension. The opportunity for business is massive.

And AI isn't happening in a vacuum; it's being accelerated by the sharing potential of the internet and big data.

"New technologies diffuse across the world much, much faster than technologies did in the past," says Carl Frey from Oxford Martin School at the University of Oxford. "The fact that more things are becoming more digital and can be transmitted at very low costs almost instantaneously anywhere in the world is the main contributor to that change."

Digitalisation, he adds, "creates powerful data which is the enabler of the expanding scope of automation".

> **At the heart of this change are technology and the advance of artificial intelligence, which will eradicate the need for millions of back-office staff and knowledge workers**

There's a generational shift, too. Generation Y, those born from about 1980 to 2000 and also known as millennials, are coming of age. And they see the world differently. Not for them the distant, analogue memories of black-and-white televisions the size of a Mini Metro or rotary dial telephones that could break your arm.

"There's a new breed coming through," says Mr Talwar, "people who were born digital and don't see cars, houses and hospitals – all they see is a universe of data. They believe that every problem can be solved by getting the data, managing it, applying the right algorithms and then underpinning it with the right technology."

Which is why Google believes it can go from search engines to extending your life expectancy to 500 years – and providing you with a driverless car along the way.

For Dr Frey the pace of change is systemic. "I don't think that people today are more creative or more innovative than people in the past," he says. "There's simply more people and we have better ways of interacting with each other than in the past, and that reaches critical mass."

And that critical mass is coming, like an express train.

But don't cancel the tennis club membership just yet as most jobs won't disappear. Many will change. Doctors, for instance, may spend more time on patient care, leaving the robots to the diagnosis, while lawyers may have more time for more clients, allowing clever AI software to do the boring reading for them.

And while the latest technology revolution is creating far fewer direct jobs than those of the 1980s and 1990s, Dr Frey points to evidence that every new tech worker supports some five jobs in services, which offers opportunities too.

One thing is certain, technology will impinge on our working lives in ever greater ways and restructure our work fundamentally. "We're going to have a more project-based economy in the future than we've been used to," says Dr Frey. "Our parents had careers, we have jobs and our children will have gigs."

He envisages armies of people working on projects from cafés, their homes and sometimes an office. And many of them are already at a Starbucks near you, nursing a long-cold coffee as they tap at their laptops. "They will need to be much more adaptable to new technologies arriving to remain competitive in the labour market," adds Dr Frey.

And that's because companies are leading the headlong march towards automation, because they have to, to survive. Some may even go the whole hog and become entirely automated business units existing only in software.

Rumour has it that some large companies think they can automate themselves to about 20 per cent of their current workforce over the next five years, which means they'll be leaner than the competition. It's like the no-frills airline battle of the last 20 years, but on a much larger canvas, and it's all driven by the digital art of the possible.

And unsurprisingly not everyone will make it.

"A lot of big companies will just disappear without trace," cautions Mr Talwar. "They will be the Pan Ams and TWAs of the modern era. It's really hard to hear that you're basically the band on the Titanic when you're the CEO or exec team of an organisation."

So if you don't want the music to stop on your watch, here's some advice from the experts: you have about three years to get your act together, to start embracing the new technologies and restructuring your business around them.

Not for nothing did Roy Kurzweil, the inventor and Google engineer, famously forecast back in 2001 that the equivalent of the last 20,000 years of progress would be packed into the next 100 years.

So what are you doing today?

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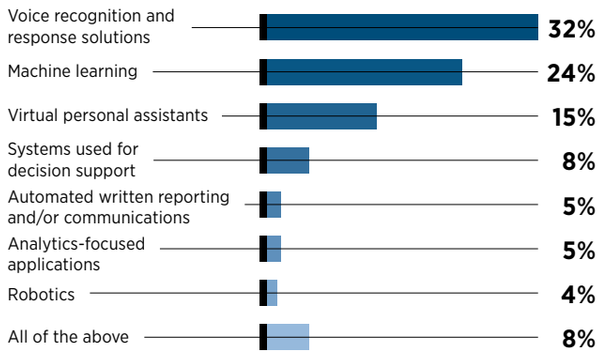
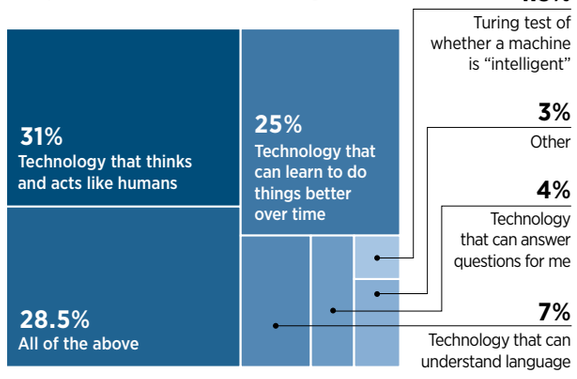
MOST WIDELY USED ARTIFICIAL INTELLIGENCE SOLUTIONS BY ENTERPRISES



Source: Narrative Science 2015

DEFINING ARTIFICIAL INTELLIGENCE

Enterprise leaders define artificial intelligence as...



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COMMERCIAL FEATURE

HOW A NEW BREED OF WORKER IS TRANSFORMING THE WORKSPACE

Tomorrow's worker is forcing companies to abandon traditional working practices in favour of co-working structures that encourage creativity. By embracing flexibility, the concept of the workplace is slowly being replaced by the workspace

Regus™

Increasing demands for co-working spaces are providing the foundation for companies of the future to emerge and flourish. With modern working environments becoming a key decision-making tool for tomorrow's talent pool, says flexible workspace provider Regus, businesses must adapt their thinking in order to attract and retain the best workers.

Flexibility is more than just a highly prized employee benefit. Increasingly, today's workers expect employers to move beyond the outdated concept of the fixed hours, fixed location role so common to generations past. It is a jobseekers market and, when it comes to deciding how they work, more than anything top talent wants flexibility, opportunities to collaborate and an unconstrained working environment.

But there is more to the future of work than the way people do their jobs. More and more, it is about where and how they do it. A recent report from Regus reveals that 45 per cent of UK workers are now based outside their main office for more than half the week.

Of course, employers want to know that such a flexible approach can work. In fact, the evidence is compelling. Employees who are able to choose when they work, where they work and how they work are known to be more motivated, engaged and productive. Research commissioned by Regus last year confirms this point with 81 per cent of the senior business people polled indicating that flexible working improves business productivity.

Understandably, demand for flexible workspace is rising, and the working patterns of today's workers are instrumental in shaping these spaces for today and beyond.

The latest workspaces accommodate the requirement for a range of different working styles within one area, meeting the variable needs of organisations and individuals. So meeting rooms are available for privacy and quiet, "hot desks" are available for drop-in workers on the move, and collaborative "co-working" spaces facilitate the sharing of ideas and contacts in a relaxed, yet professional, atmosphere.

"There has been much discussion about the flexible workspaces of the future," says Richard Morris, Regus UK chief executive. "Increasingly, they are being shaped by the people who use them, by people who want to collaborate with like-minded individuals and enjoy the freedom to define their 'work station' as anywhere they decide to sit down."

From within this more flexible style of working, the concept of co-working has emerged as one of the fastest-growing trends of recent years. Co-working describes shared-working environments, where professionals from a number of different organisations work alongside each other.

Collaboration with other like-minded workers is one of the big advantages of such an approach. Bouncing ideas off different teams and sharing concepts with developers from other businesses can be a powerful catalyst for innovation, creativity and, ultimately, productivity.

This becomes increasingly important as more and more organisations measure employee performance based on their output and productivity, rather than the number of hours they spend sitting at a desk.

There is also a compelling business case for using shared spaces. According to the *2015 GCUC/Emergent Research Co-working Survey*, 84 per cent of workers said they were more engaged and motivated when co-working. Regus's own research backs this up, with three fifths of respondents claiming co-working inspires entrepreneurial thinking (61 per cent) and innovation (60 per cent).

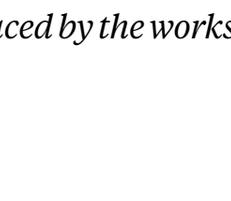
> The latest workspaces accommodate the requirement for a range of different working styles within one area, meeting the variable needs of organisations and individuals

"Organisations are increasingly recognising the need to provide their staff with workspaces that accommodate their diverse expectations, encompassing their definition of what work is, where it takes place and when it should happen," says Mr Morris. "Even though the origins of co-working lie with entrepreneurs and very small businesses, it has become increasingly relevant for much larger firms and traditional companies to incorporate the model of flexibility and co-working into their business strategy, creating the right kind of workspace to drive productivity and growth."

As well as boosting productivity and creativity, flexible working can impact positively on an individual's health. With employee wellbeing taking on increasing prominence on the corporate agenda, companies are becoming more aware of the role played by the work environment.

of UK professionals work outside their main office for more than half the week

of senior business people feel that flexible working improves productivity



of UK professionals believe co-working inspires innovation

A flexible workspace that facilitates mindfulness, encourages interaction with different people every day, and allows employees to choose which part of the physical workspace will be their "desk" for the day, boosts a sense of satisfaction, motivation and overall wellbeing.

Indeed, when it comes to planning the space where their staff will work, employers need to listen to their employees. As a recent survey by the Royal Institute of Chartered Surveyors (RICS) revealed, almost half of UK employees don't like their working environment. This has serious implications for companies striving to recruit and retain talent. If employees don't have flexibility within their work location, there is a greater chance of them looking for it elsewhere. Four fifths of those surveyed by RICS said their workplace had a bearing on their decision to stay in their current job.

Mr Morris concludes: "Clearly the days of the fixed location, rigid hours job are numbered. The latest generation of employees has very different demands and expectations when it comes to the world of work. Already we are seeing the future of work is one where the workspace adapts to the worker – not the other way around. In terms of productivity, creativity and wellbeing, the benefits are clear, and workspace will evolve to provide the environment that supports all these things."

Regus is the world's largest provider of workspace, with a global network of 2,600 locations across 106 countries. Founded in Brussels, in 1989, the company is based in Luxembourg and listed on the London Stock Exchange. For more information please visit www.regus.co.uk

Future is here or round the corner

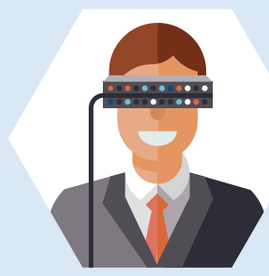
Bold new technologies reshaping work are either already with us or within touching distance. Here are eight rampant trends your company needs to deal with

8 TOP TECH TRENDS

CHARLES ORTON-JONES

01 VIRTUAL REALITY

Microsoft and Volvo are joining forces to offer virtual reality car tours. Microsoft's HoloLens will let consumers "see" hidden car features, such as crash bars, change the colour of the car and even go on VR test drives. HoloLens is a pretty jaw-dropping technology. It's a headset which overlays reality with solid looking holograms. Instead of creating, say, a gearbox on a computer screen in computer-aided design, you can see the fully formed object sitting on a table in front of you. With HoloLens you can "see" a video-conferencing screen on a wall and move it with a gesture. HoloLens will be given to developers in early-2016. It will change architecture, engineering and medicine forever. Naturally Google is funding a rival, a startup called Magic Leap. HTC and Sony have VR sets coming too.



02 BIG DATA

Famously baffling, big data is now starting to demonstrate its worth in businesses of all sizes. In essence, data scientists look for patterns in pools of data too large for humans to sift through manually. For example, supermarkets use big data to work out how many courgettes to order each day based on sales, cross-selling and dozens of other metrics. Two things are promoting big data. The first is that companies are waking up to the fact they don't need to be geniuses to use it. Consultancies such as eCommera or Blue Yonder do the hard work and tweak the algorithms for clients. Second is the prevalence of use-cases. Lufthansa uses big data to estimate the number of no-shows per flight. Each flight gets its own calculation based on multiple variables including booking demographics. This shapes the overbooking policy. With 80 million passengers a year using Lufthansa, it's the only way to produce accurate forecasts for each and every flight.

03 INTERNET OF THINGS

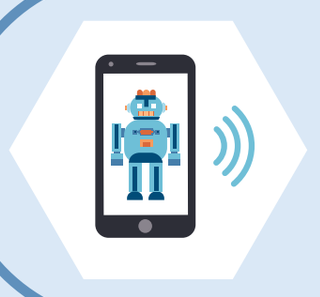
Yes, there's mockery. Do we really need internet connected kettles, toasters and belts (made by Emiota, it tracks your waistline)? Maybe not. But the internet of things is just getting started. Pretty much everything will be connected to the internet. Even cows. In any given year, 40 per cent of cows get ill and 8 per cent die. Sunburn and stomach acidosis are common. The solution? VitalHerd is a US startup making a pill swallowed by the cow to transmit health data to the farmer. Sensors capture heart rate, respiration, rumen contraction, core temperature and pH. Next up humans.

04 APPLIFICATION

If you have a few silver streaks in your hair, you may remember PCs from the 1980s. They were pretty awful to use. Typing stuff like *dir in a command terminal to move directory... yuk. Today? Toddlers can use iPads. Everything is getting easier to use. This trend is vital in business. Interfaces are getting simpler. The Department for Business, Innovation & Skills improved the performance of accountants by introducing intuitive dashboards, stripping out extraneous data. The new F35 fighter jet massively reduces pilot information to improve concentration. Simpler user interfaces take less time to learn, are more fun to use and enjoy wider adoption. Everything should be as easy to use as a mobile app, hence "applification".

05 OPEN SOURCE

Did you know Android is open source? You can go online to Android Open Source Project and make your own version. The Firefox browser is open source. The Linux operating system is used by 485 of the top 500 supercomputers and around 65 per cent of the active web server market. As a desktop operating system, Linux struggles, hence the lack of common awareness of the triumph of open source. But from tiny devices through to warships, Linux is becoming the default operating system. Why? Cost. Security. Familiarity. And software developed with the help of a vast open source community.



06 CHATBOTS

This tech went from silly to serious in about a year. Siri hit the iPhone and suddenly it became normal to ask a telephone to tell you the weather or set an alarm. The IBM's Watson beat the top competitors on the quiz show Jeopardy. Microsoft integrated Cortana into Windows 10. Gartner predicts by 2017 the cost of managed services will fall 60 per cent due to chatbot services. The goal is to create superintelligent assistants who can converse in complex and unstructured formats, and then take action. A great illustration is the film *Her* featuring Scarlett Johansson as a chatbot so real she doubles up as a romantic partner. Futurist and Google head of research Ray Kurzweil forecasts the arrival of virtual "ScarJos" in 2029.

07 DRIVERLESS CARS

The implication of driverless cars isn't obvious. At first we'll go to the pub, drink and zoom back again while over the limit. But then what? Actually, driverless cars are going to be a very, very big deal. Commuters can sleep in vehicles, arriving at work on time. Driverless cars may dock together for efficiency. They may render high-speed rail obsolete. Retail, holidays, logistics and city planning will all change when the first driverless cars arrive.

08 HACKING

"In a few years there'll be enough computers in your home that getting hacked and being haunted will be functionally indistinguishable." This comment by a Twitter comedian is eerily prescient. A user of the Philips app-controlled lightbulb reported plunging her tenants in San Francisco into darkness from Wales with a clumsy click. Hackers pose a more serious threat. A report by HP says 70 per cent of connected devices contain "serious vulnerabilities". We've already had smart TVs which listen to keywords in users' conversations and sell the data to advertisers. If security is not increased, the application of technology in the home and workplace will be seriously diminished. The time for taking this issue seriously is long overdue.

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Can the machines 'learn' or 'think'?

Computing power and data have given birth to artificial intelligence, which is set to transfer labour pains to the world of work

◆ **COGNITIVE COMPUTING**

● **CHARLES ARTHUR**

The marriage of computing power and data is finally bearing fruit in the field of cognitive computing, sometimes called machine learning or, more controversially, artificial intelligence.

In its most everyday form, we see it in tools such as Google Translate or Microsoft's Bing Translate, which can translate phrases and documents effortlessly across multiple languages. More futuristically, the promise of self-driving vehicles, which can complete entire road journeys without driver intervention, is already being realised.

Yet the biggest revolution in work is happening at some of the most basic levels, such as reading and dissecting legal documents to extract meaning and useful information. The tedious slog of work can be transformed by computers which are able to read and parse legal phrases, and summarise them or enter relevant details into a database or spreadsheet.

Are these thinking machines? The idea has fascinated philosophers and technocrats for ages. But with every advance that machines make into space normally thought of as "thinking", the goal posts retreat. Until IBM's Deep Blue defeated then world champion Garry Kasparov in 1997, chess had been thought of as a redoubt for human thinking.

> **It doesn't matter whether the computer can 'think', what matters is whether it gets the job done as well or better than a human**

More recently, the British company DeepMind created a computer program which can learn to play 1980s arcade games, such as Space Invaders and Breakout, by trial and error, based on what it sees on the screen, but without being told any rules or given any objective except to maximise its score. It's a classic conundrum: is the DeepMind system "thinking" or "learning"? Certainly, it improves its score, and discovers neat ways to play games better. Google acquired DeepMind for £400 million in 2014.

Yet the impressive feats of translation tools don't indicate that the machines behind them can actually "think", nor even understand what it is that they are translating. Instead, they rely on a huge resource of data, principally documents containing the same content, which have been translated simultaneously into multiple languages. Publications from the United Nations and the European Union are highly favoured, for example, which may explain why machine translations can sound so remarkably stilted and formal.

But to a company using such a translation service, it doesn't matter whether the computer can "think", what matters is whether it gets the job done as well or better than a human. And a growing number of studies suggest that more and more jobs are susceptible. A recent study by the Bank of America forecast that the market for robots and artificial intelligence (AI) solutions will be worth $153 billion by 2020, of which AI solutions will be worth $70 billion. In ten years, there could be $9 trillion of cuts in employment costs as AI systems take over knowledge work, as self-driving vehicles and drones make $1.9 trillion of efficiency savings compared with having the work done by people, and robots and AI could boost productivity by 30 per cent, while cutting manufacturing costs by between 18 and 33 per cent.

The broad wave of cognitive computing is thus ready to break over the world of employment. But it's not a single, simple implementation. "The area splits into two fields," explains Andrew Martin, who is studying for a PhD in cognitive computing at the Tungsten Centre for Intelligent Data Analytics at the University of London. "There are people trying to make more and more complex systems with more and more data, hoping against hope that the problem will solve itself through big complex systems. And the other group is sitting back and going to the philosophical drawing board trying to work out what intelligence actually is, and how it emerges."

So which group is the Tungsten Centre in? "Sort of both. We're making big systems, but aware of the limits of what computers can and can't do," says Mr Martin. "We have a view of the things that won't be solvable."

Some problems look as though they're beyond solution by one approach, but that doesn't mean it can't be done. In self-driving cars, Mr Martin says, "you have a machine that has to act in very complex situations, but it will never have the full situational awareness that a human driver does".

Yet this sounds like some of the arguments that used to be used about chess: a computer could never win at chess, some used to argue, because it wouldn't be able to understand the nuances of certain moves or understand ideas such as control of the centre of the board. Those arguments went by the board when IBM's Deep Blue defeated Kasparov. Being able to do lots of calculations very quickly turned out to be a sufficient substitute for a human's full situational awareness of the chess board.

Indeed, Google's cars have driven millions of miles in the United States and the only accidents have been the fault of other, human drivers. In fact, a police officer recently flagged down a Google car because its driving seemed over-cautious.

Mr Martin says that with cognitive computing, "some things are instantly solvable because they're constrained – the problems have clearly defined limits – and some people might think that solving the quickest route to somewhere isn't cognitive computing". But that used to be the ambit of taxi drivers with huge experience; now it's available to anyone with a smartphone.

So which are the fields that will be most affected by advances in cognitive computing? Analysis of legal documents is a key one. London-based law firm Berwin Leighton Paisner recently made substantial time-savings by using such a system to analyse the content of hundreds of Land Registry documents automatically, rather than getting the same work done by interns and paralegals.

"The real value that you add as a lawyer is about anomalies," says Wendy Miller, a partner at the firm. "If clients have a huge number of contracts and want to understand them, it's useful to have these data extraction tools. It's applicable to a surprising number of tasks and we're working to put it to work in other areas of law."

At the Tungsten Centre, Mr Martin says the areas of work which will be most affected are those which "don't need much human inspiration". The centre is already studying the world of finance.

He points to vehicle manufacture as one which could easily be done by such systems and more prosaically to supermarket self-service checkouts. "The road haulage industry is at the biggest threat of being seriously disrupted by AI," he says, "because motorways and motorway driving are relatively constrained environments."

> **The way to think of cognitive computing is that it gives us very fast and obedient, but extremely stupid, slaves**

There have already been tests of self-driving trucks in the US, Germany, Holland and Japan by Daimler, Scania, Ford and others. The potential for employment disruption is huge, since there are 3.5 million professional truck drivers in the US alone, whose income generates support for millions more people, whether in their families or the truck stops they visit as part of their work.

What then will they move on to? How will the world of work be affected? At its core, this is the same question as that faced by horse and stable owners at the end of the 19th century as motor cars arrived. The assumption is that grooms and bridlemakers all found new work. But what's never clear is whether they found better-paid work or subsistence. That tends to be the concern around the march of the new world of AI, which can also be deployed far faster than the car factories of the early-20th century could ramp up production.

"The way to think of cognitive computing is that it gives us very fast and obedient, but extremely stupid, slaves," says Mr Martin. "The parts of industries that will remain are those which require knowledge."

But what parts are those? How do we define "knowledge" so that we can be sure it won't be accessible to a machine-learning system in five or ten years? Mr Martin says it's easier to think of the tasks that will be susceptible, "things that you can think of as mostly rule-following and rote behaviour, repetitive, with no creativity, or where there's only a small amount of independent thought and a lot of people doing it".

The contrast is with fields which require deep knowledge and experience, such as the law and medicine. Even though IBM's Watson is being used to analyse scans and data from cancer patients in a number of hospitals in the US, the expectation is you will still need doctors and lawyers to deliver the final decisions on what to do and where to focus.

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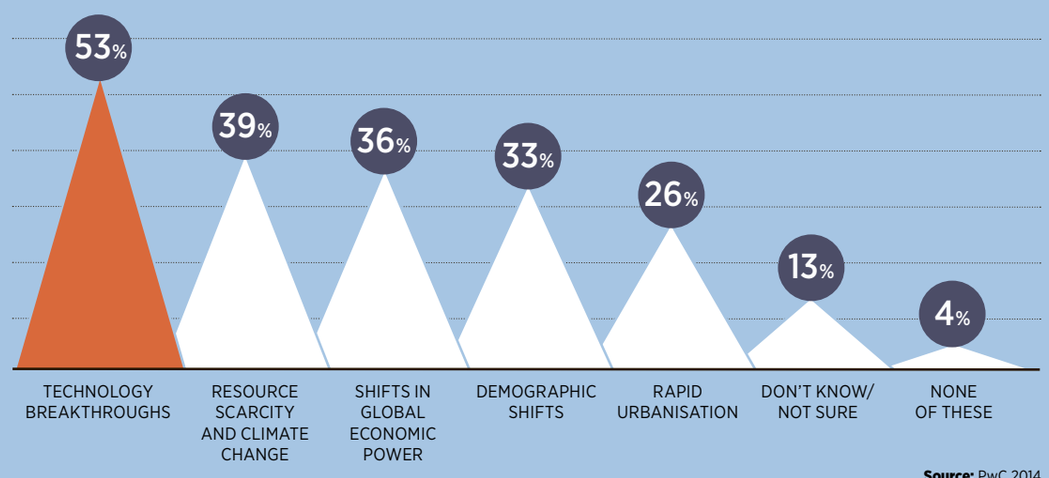
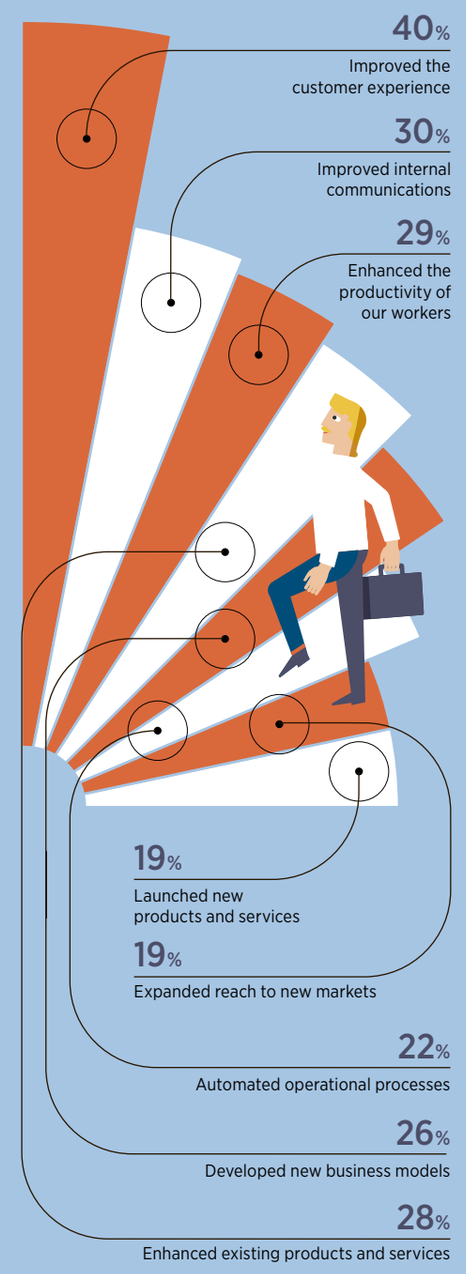
TECHNOLOGY: CHANGING THE WAY WE WORK

FACTORS TRANSFORMING WORK OVER THE NEXT FIVE TO TEN YEARS



Source: PwC 2014

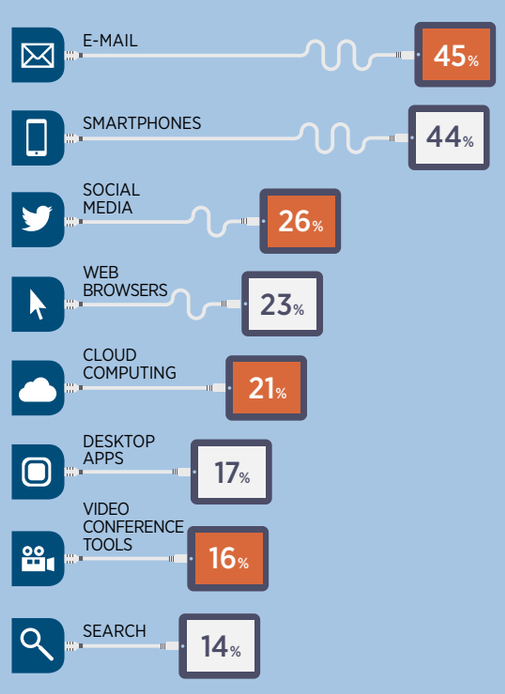
BENEFITS OF ADOPTING DIGITAL TECHNOLOGIES



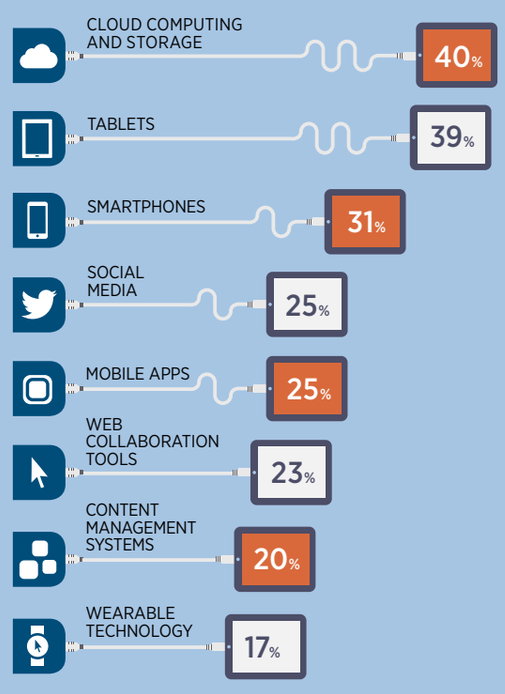
Source: *Future of Work*, Raconteur 2014

DIGITAL TECHNOLOGIES ARE CHANGING THE WAY BUSINESSES WORK

WHICH DIGITAL TECHNOLOGIES HAVE HAD THE MOST IMPACT OVER THE PAST TEN YEARS?

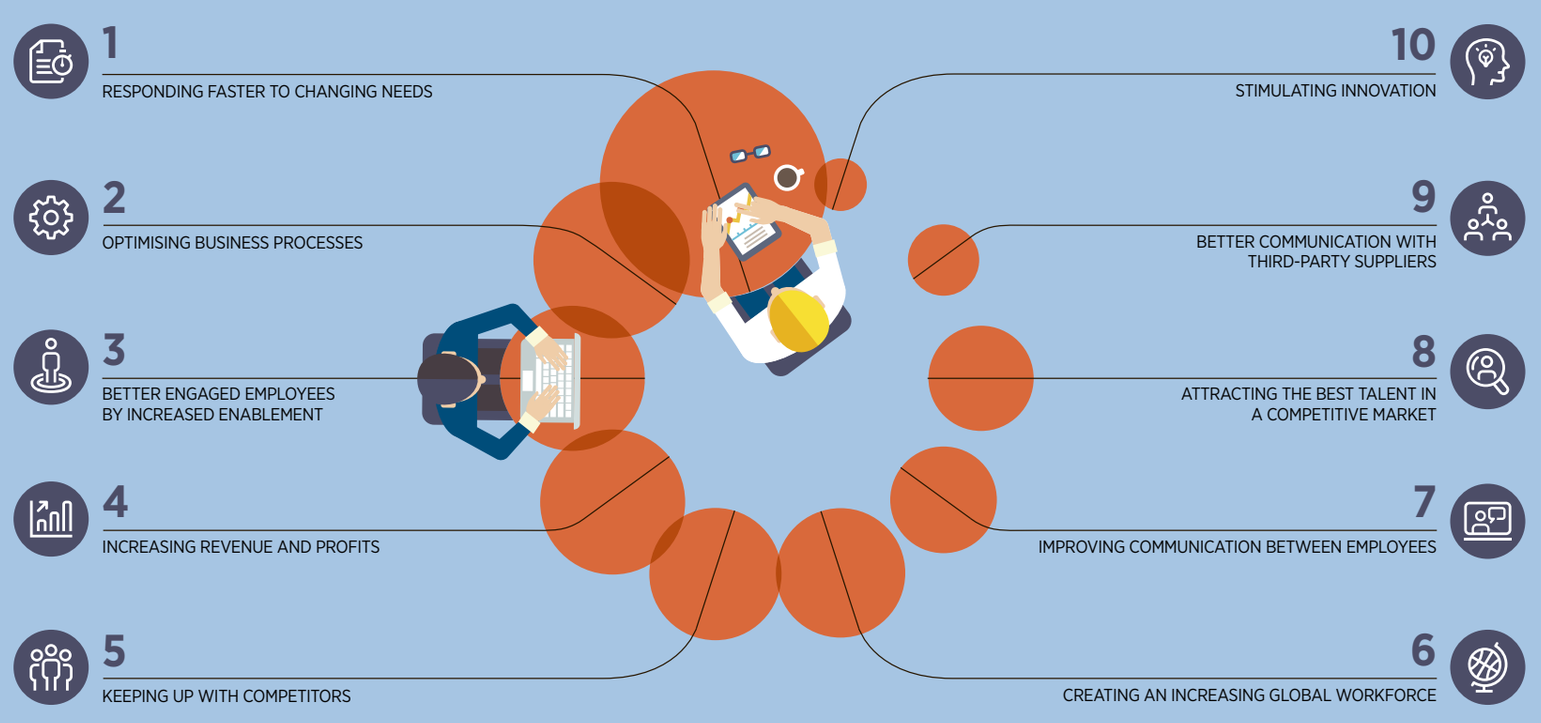


WHICH DIGITAL TECHNOLOGIES WILL HAVE THE MOST IMPACT OVER THE NEXT FIVE YEARS?



Source: *Future of Work*, Raconteur 2014

TOP 10 DRIVERS BEHIND DIGITAL TRANSFORMATION FOR BUSINESSES



Source: *Future of Work*, Raconteur 2014

GLOBAL TECH PREDICTIONS, 2015–2020

42%	**$106bn**	**25%**	**20%**	**2m**	**$201bn**	**$6.3bn**	**75%**
of IT decision-makers increase spending on cloud computing	global software-as-a-service market, up 21 per cent on 2015	of IT budgets will be deployed in mobile apps	of business content will be authored by machines	employees will be required to wear health and fitness tracking devices as a condition of employment	will be spent on enterprise apps, up from $149.9 billion in 2015	estimated size of the enterprise wearables, up from $218 million in 2015	of organisations use advanced analytics to improve decision-making
Source: Computerworld	**Source:** Forrester	**Source:** IDC	**Source:** Gartner	**Source:** Gartner	**Source:** Gartner	**Source:** Tractica	**Source:** Gartner
2015	2016	2017	2018	2018	2019	2020	2020

CASE STUDY: BERWIN LEIGHTON PAISNER

London-based law firm Berwin Leighton Paisner had a very specific challenge: analyse more than 700 Land Registry documents for a client, to extract details about land ownership such as the name and address of the overall owner, and related interests such as outstanding mortgages and other debts tied to them, plus any third-party interests in the title. And the answers had to be 100 per cent accurate.

In the past, the only way to do that would be to assemble a team of interns and paralegals, give them the documents and leave them to slog through until they emerged with the answers. Together with training and necessary cross-checking to make sure that nobody had made any mistakes, this could consume huge amounts of time, as well as being boring.

"I once had to do legal disclosure checking on a huge dispute where I was put in a room with documents piled to the ceiling and told to get on with it," recalls Wendy Miller, a partner at the firm and a litigator in commercial real estate disputes.

This time the law firm turned to cognitive computing, which has begun to revolutionise much of the tedious work in legal analysis. The firm had already been looking for ways to improve efficiency. "What we do is very personnel-heavy," says Ms Miller. Also, the documents were likely to arrive in near-random groups, making resource planning difficult. "You don't want a team sitting around doing nothing, but it's tricky if you then find you need 200 documents analysed by tomorrow," she says.

The company turned to a British company which specialises in cognitive computing systems for information-intensive businesses. It designed a system which could scan the PDFs generated from the Land Registry and generate a spreadsheet that could be queried by the law team.

Compared with the 45 minutes it would take a human to examine each document, the RAVN system has already saved more than 500 work-hours. "The great efficiency of artificial intelligence is that we have complete flexibility because it's always there in the background," says Ms Miller.

So are the people who would have done that work out of a job? "Extracting data from documents isn't perceived as valuable, so we were using junior people on work that's hard to charge for," she says. "Instead, we've been able to use those people on later stages of the project which have more value."

COMMERCIAL FEATURE

THE FUTURE OF TALENT IS THE FUTURE OF WORK

Organisations that thrive use systems to maximise the value of their people. However, underpinning successful organisations are digital technologies, collaborative tools and new ways of working, which are driving significant changes in the types of skills and people organisations need to thrive

Cognizant

Long gone are the workers who kept the industrial model of the 20th century operating. Today, a new breed of worker emerges, knowledgeable, self-guided, tech savvy, able to work with creativity and flair. Above all these workers are connected. They just don't do digital, they are digital. But being digital doesn't belong to any one demographic: Digital is a mindset, and this mindset is changing the way companies work and the people they need.

How companies can harness new ways of working, acquire and nurture the skills they need and maximise the value of people (their most important asset) is the subject of a major new research project from Cognizant's Center for the Future of Work.

The project sets out to examine the future of work from the perspective of talent. What does talent look like in the digital age? Where will it come from? What structures does it need to thrive? How do companies harness and engage with it? Together with the Economist Intelligence Unit, we surveyed more than 500 line-of-business stakeholders across Europe to understand what the future of talent means in the digital age. Our initial analysis reveals a compelling set of challenges that need action today.

Right now there is a profound recalibration taking place between work and the individual. The imposition of work on our personal lives, how we collaborate together to get work done, how we gain value from it, get rewarded for it, incentivised and motivated to do it are all changing. This changing nature of work goes way beyond new hours or policies for working at home; we are talking about whole new norms for work. The traditional work model is breaking down into something much more iterative, transient and networked. Transitioning a company successfully into its digital future means addressing these issues.

> It's crucial to get the talent model right for the digital age

Cognizant believes a big part of winning a digital future is building the right roster of skills. These go beyond harnessing big data and analytics, which many see as the prize from deploying digital tools and technologies across customer and supplier relationships. If firms in the UK are to succeed and want to win their digital futures, other capabilities will need developing and nurturing from within. Softer, interpersonal or social skills will determine how effectively clusters of workers can collaborate in a virtual network or maintain team cohesion when members are distributed across a wider network, sometimes internationally or even belonging to your supplier or customer's organisation.

Results from our survey reveal how this new world of work is taking shape. Our research qualifies the present digital skills gap, with strategy and business modelling commanding a premium among respondents. Where the digital skills gap currently lies is in the front office, client-facing customer services, online sales and digital marketing techniques, such as search engine optimisation. However, the survey reveals this gap is set to spread beyond the front office into skills for data and analytic capabilities, security and privacy requirements, and initiatives around smart product development, all of which are all beginning to infuse processes that sit inside and outside the company.

The digital skills gap seems to be following the crude laws of supply and demand. One third of survey respondents reveal the digital talent they need expect higher salaries than they can afford; 50 per cent of respondents reveal there is an insufficient local supply of digital talent. Getting the right talent in place at the right time also suffers from the perception that a "digital" project lacks a strong business case. There are also challenges with getting senior stakeholders on side with what needs to be done, despite the evidence from our survey that fragmented workflows and reduced worker productivity need addressing from the top.

Our research concludes that digital primes a colossal cultural change as the shift into digital accelerates. The physical footprint of a company will shrink. Smaller hubs will emerge. There will be new organisational structures emerging to break down the silos that have developed in companies over decades. These all point towards a wholescale, multifaceted cultural change. Companies will need to forge new digital career paths for people alongside innovative ways of motivating and rewarding talent. All in all, the organisational model is morphing into something more dynamic, fluid and collaborative.

Get it right and this new breed of talent can be used to harness innovation, drive customer co-creation and develop intercompany collaboration as deeper, more intense relationships with suppliers emerge over time. This is why it's crucial to get the talent model right for the digital age.

The talent gaps we're seeing today are moderate, but there is no doubt they will grow. The companies we talk with are beginning to re-examine how they repurpose their existing workforce to give them a digital mindset. They also recognise that attracting the best talent means refocusing their brand towards one of an "employer of choice" because the competition for digital skills is only just beginning.

Cognizant believes that through all this a new talent model is starting to emerge. What this means for the successful companies of the future will be examined in more detail in our forthcoming *The Future of Talent* report, due out early next year.

To reserve your copy of *The Future of Talent* report please e-mail the author euan.davis@cognizant.com

Getty images

Repairing an assembly line robot while wearing Epson's Moverio Pro BT-2000 smart headset

Technology suits the task

Wearable technology has the potential to revolutionise the workplace and make a significant return on investment

◆ **WEARABLES**

● **JANE BIRD**

From glasses that respond to people's gestures and display instructions before their eyes, to gloves that bleep when the user picks up the wrong component, wearable electronic devices will transform the workplace.

Also beginning to make an appearance are electronic badges, wrist and arm bands, smartwatches and clothes with sensors woven into their fabric. Further applications are likely to emerge once people become more aware of the potential.

The market for workplace wearables is still young, says Richard Absalom, principal analyst of enterprise mobility and productivity software at research company Ovum. "But we think it will start to take off in 2016."

In Ovum's annual *Employee Mobility Survey*, of 4,500 people in 20 countries, only 8 per cent said they wore wearable technology at work. They are probably mainly Fitbits, Nike FuelBands and smartwatches, Mr Absalom says. However, of those with smartwatches, almost half (47 per cent), said they were using them at work. "We think this is primarily to receive notifications when they have e-mail," he adds.

Companies will not buy wearables for staff unless there is a quantifiable gain in terms of enhanced performance, says Erik Jacobson, wearables expert at consultancy Accenture. "What companies want to see is return on investment and demonstrable benefits, such as improvements in safety, efficiency and staffing," he says.

Such devices are at their most useful when people need to keep their hands free, whether they are up a mast mending a power cable or repairing a jet engine and unable to remove their anti-static gloves. In the past, if they needed to check something, they would have had to stop what they were doing and consult laptops, tablets or other devices.

Smartglasses, such as Epson's Moverio, have built-in sensors including a camera, gyroscope, accelerometer, microphone and a GPS location detector. Wearers can control them by speaking commands or by moving their arms.

They have transparent lenses on to which images can be projected to create so-called augmented reality. In complex manufacturing, they can be used to overlay blueprints on what the user is viewing and give step-by-step instructions, enabling a component to be positioned correctly or engineering diagnostics carried out in the right order.

Epson's smartglasses are being used in the final inspection of vehicles, says Valerie Riffaud Cangelosi, new market development manager for Epson Europe. "Our customers are companies that want to apply digital information for training, maintenance and logistics," she says.

Smartwatches are useful for workflow and scheduling, says Mr Jacobson, reminding people of their next task, changing instructions or raising an alert if a crucial step has been omitted. "They typically replace a walky-talky or act as a much more modern, nuanced pager, and are useful in large locations such as supermarkets, warehouses, hotels, hospitals and airports," he says.

But there are obstacles to wearables gaining acceptance in the workplace. One problem is distrust of people wearing cameras, says Simon Hall, wearable technology expert at PA Consulting. "There is a role for heads-up displays with video recording in hazardous environments, such as oil rigs and power plants, where there is a high risk of accidents," says Mr Hall. "But not in normal corporate workplaces, where it is more gimmickry than utility."

Google Glass was seen as "creepy", claims Mr Absalom, "because people could start filming at any moment".

> Companies will not buy wearables for staff unless there is a quantifiable gain in terms of enhanced performance

Aesthetics are also important. Although fashion is not a factor in workplace wearables, you need to bring the workforce with you, says Mr Jacobson. People who have to wear high-visibility jackets, hard hats and steel-capped boots to work will be less concerned about how a device looks if it makes them safer or helps carry out their jobs. "The barrier is lower, but design is still important," he says.

Many organisations have reservations because, like smartphones, wearables can represent a major threat to security. However, most are just an extension of smartphone technology, says Mr Absalom. "So organisations should be able to use their existing mobile device management software," he points out.

Workplace wearables need to be easy to use. Not everyone is a geek or a techie, says Ms Riffaud Cangelosi. "And devices need to be comfortable," she adds. Epson is working on making its headsets comfortable eight hours a day. Batteries will also need to improve. At present they are heavy, get hot and don't last long enough.

Using devices to monitor workers can be seen as intrusive, creating an oppressive working environment. It may be acceptable when there are safety concerns. For example, sensors to detect alertness and warn truck drivers when they are dangerously sleepy, to avoid fatigue-related incidents. But it can be seen as too much of an infringement of privacy, says PA Consulting's Mr Hall.

Accenture has been approached by financial services companies to monitor people making big financial decisions. They don't want bad deals being done by stressed people, Mr Jacobson says. "This is something we're looking at for the future," he says.

However, workers seem willing to monitor their own fitness, as is happening at Novartis, the Swiss pharma giant. The company offers employees free wearable devices to monitor their daily activity rates. It has also set up an annual triathlon in which employees form teams to compete with each other in virtual running, swimming and cycling races.

Employee uptake has grown from 9,000 in 2013 to 16,000 this year across 65 countries. Of those who took part in 2014, 83 per cent reported a positive impact on their attitude to exercise, 62 per cent reported a decrease in stress at work and 49 per cent said they had lost weight.

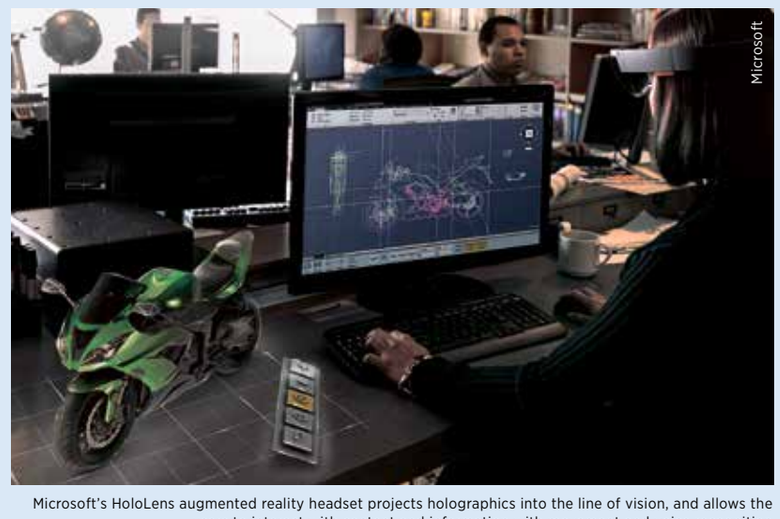
Workers might appreciate monitors which, when used in combination with clever analytic software, can predict how productive you will be based on your sleep patterns. If employers made them available to staff, Mr Hall says, people could predict when their best work would be to help plan their days.

Employers will also need to consider who owns the devices. Mr Jacobson says: "Do people leave them for the next person at the end of their shift, in which case their might be concerns about hygiene, or do they take them home?"

Unlike when buying employees laptops, companies will have to decide if they are going to provide a range of sizes. A 6ft man is likely to have much bigger wrists or a larger head than a 5ft woman.

But the main constraint on uptake of workplace wearables is the lack of "killer apps". A recent recruit to Apple, for example, says the main use for the Apple Watch seems to be buzzing a reminder to people to get up out of their chair every hour to exercise their legs.

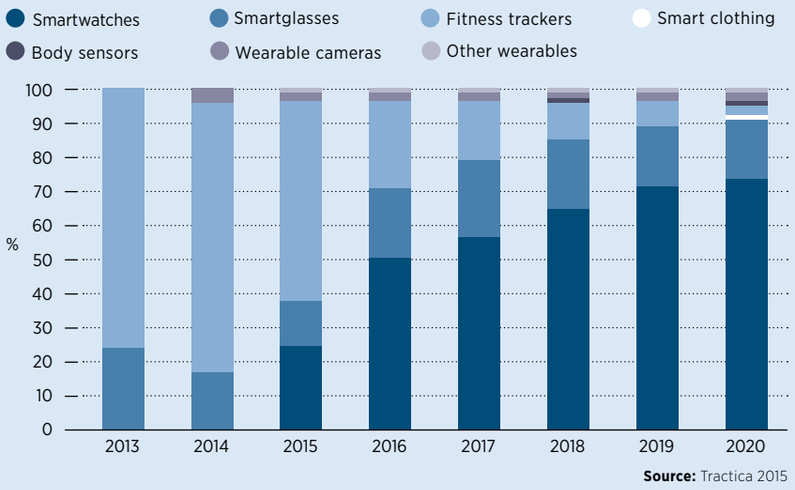
The success of the much-heralded HoloLens heads-up device coming from Microsoft next year will depend on there being an ecosystem of applications. As Mr Absalom concludes: "Companies are not going to invest in wearables unless they make work smoother and more efficient."



Microsoft

Microsoft's HoloLens augmented reality headset projects holographics into the line of vision, and allows the users to interact with content and information with movement and voice recognition

GLOBAL ENTERPRISE AND INDUSTRIAL WEARABLE REVENUE SHARE BY DEVICE



Source: Tractica 2015

TOP 5 INDUSTRIES CURRENTLY INVESTING IN WEARABLE TECHNOLOGY

- HEALTHCARE
- TECHNOLOGY
- AUTOMOTIVE
- INDUSTRIAL PRODUCTS
- BUSINESS AND PROFESSIONAL SERVICES

Source: PwC 2015

Freelancer economy is on the rise

Employing freelance staff can be a win-win for both employers and freelancers, but it must be managed carefully

◆ **FREELANCING**

● **DAN MATTHEWS**


Getty Images

There is a curious paradox happening in major cities around the western world. While billions of pounds are being spent every year planning and constructing towering office blocks designed for large groups working in one place, the workforce itself is quickly becoming diffuse.

Better communications technology is enabling more people to work at home, with clients or in desk-share spaces, while a favourable tax regime for micro-businesses and a brighter spotlight on the work-life balance means more and more are making the move to self-employment.

The impact of this is huge. Falling unemployment – the cornerstone of the government's proud record on the British economy – would look less impressive were it not for the million-fold explosion in micro-businesses that has taken place since 2010.

The genie is out of the bottle – clearly also a fan of working remotely – and it's hard to see a future where everyone falls back into old patterns of daily commutes and nine-to-five desklubbing. In fact, the opposite scenario is much more likely, with even more people waving goodbye to the boss, only to wave hello again as an untied contractor.

It's happening across all sectors from the creative industries to health and contractors are needed for a broad range of tasks, according to Thomas Bridge, operations director at Russam GMS, a UK interim management firm.

"The biggest rise we are seeing is in the public and charity sectors. Large central government departments are going digital by default," he says. "Once it's done, there's no need to keep all the developers, so interim IT experts are going in for anything from six to thirty six months. In the charity sector, because of the recent problems, we're seeing lots of finance and fundraising interims required."

The question whether or not the trend is a good thing has many parts to it. For individuals it's empowering as they call the shots and the money they earn correlates directly with the work they do, unlike the poor grunts who slave away for a fixed salary every year.

Conceptually, at least, they can take days off at the drop of a hat. Pick the kids up from school, go to the dentist guilt-free and, if work piles up, they can cram over the weekend to clear the books. Contractors tend to get better rates of pay per job too.

But weighing against these pluses are a few minuses. Freelancers are responsible for all the machinations of their business. They are the business developer, the book-keeper and the office manager, as well as the doer of work.

Billable hours are reduced by the need to chase up invoices and file tax returns. Any form of downtime, through ill health, childcare or a lack of work, is dead space. Freelancers don't get benefits, expenses are tax deductible, but you still have to pay them, and your pension is your own responsibility, as is insurance.

It's a mixed picture and for employers it is no clearer. Many bosses celebrate the rise of the freelancer because it offers access to a rich vein of talented individuals minus the liability of keeping them on the payroll full time.

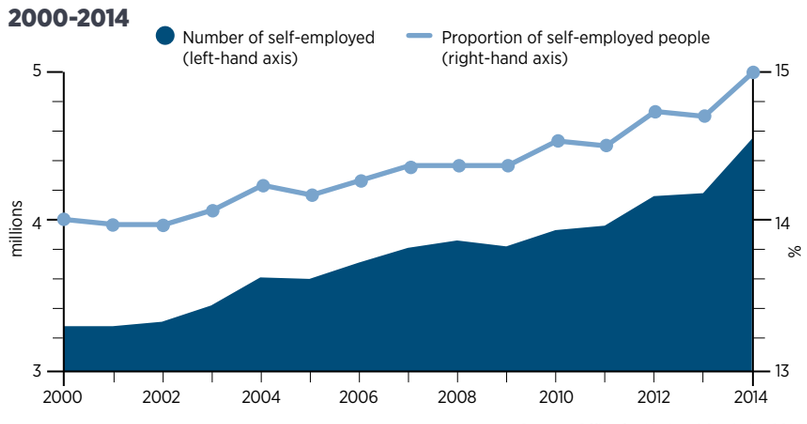
They can pay a £150,000-a-year consultant £12,000 for a month's work, then shake hands and walk away. But here too there are questions, data security, reliability and loyalty among them. Can you guarantee that a freelancer will give you the same commitment as a full-timer?

Watching contractors come and go is giving PAYE employees ideas too, leading to a major upheaval in the working patterns of employees. It's potentially a great motivational tool, but also a situation that must be organised and regulated.

James Poyser, founder and chief executive of inniAccounts, used freelancers when he started his businesses and says business owners should take a strategic approach that incorporates all the benefits of a flexible workforce.

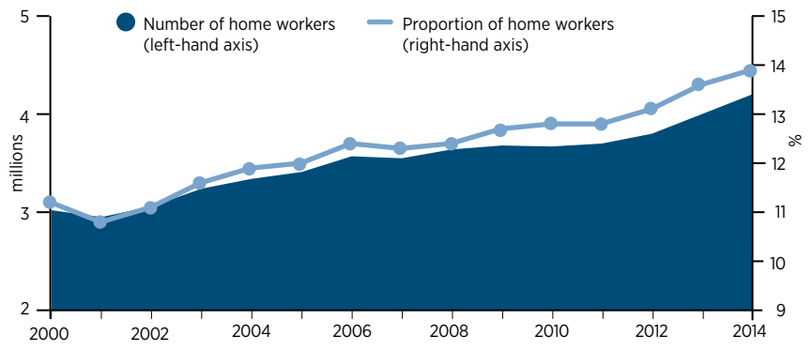
"One of the contributing factors to our growth success is we used freelance skills for very specific, finite pieces of work – work that simply does not justify headcount," he explains. "In the early days we built a virtual team with wide-ranging expertise and it gave us access to talent we wouldn't otherwise have been able to afford. Of course, I was aware that I might not be able to attract the skills as a startup too.

SELF-EMPLOYED AS A PERCENTAGE OF TOTAL UK WORKFORCE 2000-2014



Source: Office for National Statistics 2014

NUMBER OF HOME WORKERS IN THE UK



Source: Office for National Statistics 2014

"Our model was to hire ten specialists part time rather than one generalist. It really paid off and I see a lot of small businesses growing their businesses this way. It provides a fast start to creating your brand and the infrastructure you need to make the idea a reality."

Julia Kermode, chief executive of the Freelancer and Contractor Services Association, says the growth in freelance numbers is positive overall, but a mixed blessing for employers.

"It gives them the ability to flex their workforce in ways that permanent employment doesn't allow, but they are having to reconsider how to attract freelance skills, and how to juxtapose their employee value proposition and the proposition they use to attract freelance skills," she says.

> **One of the contributing factors to our growth success is we used freelance skills for very specific, finite pieces of work**

"Thereafter, they are having to learn how to obtain and retain visibility of the sum of employed and non-employed workers, and to manage them as one workforce, which is a new phenomenon that the vast majority of employers are yet to grasp."

David Knight, associate partner at KPMG who advises businesses on how to optimise their workforces, agrees that businesses will benefit if they can build structures that blend the separate needs of employees and freelancers.

"If a freelance workforce is managed effectively, through a focus on early induction, productivity management and skills migration to permanent workforce, then there shouldn't be any major issues. Many organisations, however, fall short in these requirements and thus can experience some issues. Comparable rates of pay, if transparent, can also be disruptive."

So what's the best advice for employers looking to take advantage of the freelance revolution without falling into the traps? Jason Kitcat, micro-business ambassador at Crunch Accounting, has a few ideas.

"If you haven't employed freelancers before, take baby steps. Outsource a small project to get a taste for it. Debrief with the freelancer once the project is over to see how they think it went and use that to inform how you manage your next project," he says.

"Remember a freelancer has other clients and they have to manage you as much as you have to manage them. If you hire the right freelancer, the actual work shouldn't be a problem, so ensuring a successful outcome is purely a question of effective communication."

New freelancers entering the market every day present an opportunity for organisations to complete work in a flexible no-nonsense way. But they should invest time and effort in creating the right blend to deliver flexibility without sacrificing consistency.

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Making a 'work anywhere' business

Organisations that encourage employees to bring their own technology to work can reap the rewards of a connected and empowered staff

◆ **BYOD**

● **DEREK DU PREEZ**

Getty images

BYOD or bring your own device has become well known among enterprise IT buyers thanks to the fast-moving consumer technology market, which ensures employees now own better smartphones than their workplaces can provide.

If you don't secure it and make it policy, it's going to happen anyway – this has been the lesson learnt. People are no longer willing to put up with cumbersome tech given to them by their employer and will figure out so-called workarounds using their own equipment if left with no other option.

However, BYOD isn't just about smartphones. If you're just thinking about it at that level, you've missed the point. It's about enabling your workforce to work wherever they want, using whatever devices they like, allowing them to access data via cloud apps and using collaboration tools which don't require them to be on-site.

It's about enabling staff to take control of their working life and allowing them to break down organisational silos. Microsoft's chief envisioning officer Dave Coplin explains the impact this can have on employees and companies. "The freer the information can flow within an organisation, the better informed and more agile the organisation is. When you break information out of silos and you allow people to collaborate more freely – that's a great thing," says Mr Coplin.

"People intuitively know this works because they are doing it in their personal lives on social media. When you use social media, your starting position is to share by default. You are empowering the individual to become more engaged at work – you are giving them access to more information at work.

> **You are empowering the individual to become more engaged at work – you are giving them access to more information at work**

"You are saying I know you've got your day job, but if there are other areas of the business you can add value or want to get involved in, go do it. That's a very human thing – all of a sudden I start to feel a bit more valued."

O2's enterprise division carried out some research this year with YouGov, which found that if British companies fail to take advantage of the "anywhere office", it could cost them as much as a combined 6.6 million hours a week or £1.6 billion. And yet just 48 per cent of businesses have integrated digital into their business strategy, which means that opportunities for employees to work better are being lost at more than half of companies in the UK.

Ben Dowd, O2 business director, concedes this new approach to working can present challenges. "We absolutely see that getting the right technology in front of people can drive significant benefits for businesses. But BYOD can be a complex process for any business; it can be daunting to select the devices, as well as the right tools and technologies to manage devices that the company does not own," says Mr Dowd.

However, it's not something that can be ignored. Why? Because the demographic within organisations is changing at a rapid rate and the younger generation in particular will not be willing to settle for rigid work structures, when their personal communications are free and flexible. Millennials or Generation Y need to be considered, according to Paul Trulove, vice president at identity and access management provider Sailpoint.

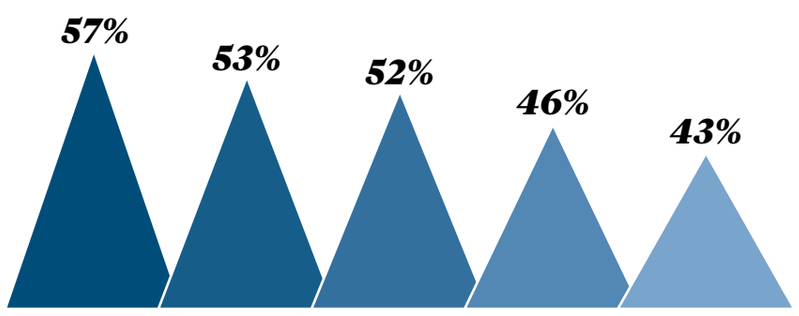
"I met with a customer last week whose chief security officer had done a study to understand better the user community he was trying to secure. And what he found was that 60 per cent of his new hires are millennials and those younger workers coming into the enterprise have radically different expectations of what they can do with corporate applications and data," says Mr Trulove.

"They were accelerating their BYOD programme in order to help the recruiting and retention process with some of those workers.

Gatwick

Gatwick Airport has been running a BYOD programme for the past two years

TOP 5 DRIVERS FOR COMPANIES USING MOBILE/REMOTE WORKING



Source: *Harvard Business Review* 2015

The reality is that if you don't, they end up finding workarounds that are even more insecure."

The organisations that have been able to adopt BYOD, cloud-based apps and flexible working are already reaping the benefits. Gatwick Airport, for example, has been running its BYOD policy for more than two years. Once an organisation that insisted its employees use BlackBerry devices, it now gives employees a monthly allowance, and urges them to go out and choose whatever devices they see fit for their job.

Kate Bowman, Gatwick head of human resources, explains that as well as reducing the demand for IT support, as employees now go to their device providers if there are any problems, the policy has enabled staff to get more out of their working day and has increased their IT capabilities.

"There has definitely been an increase in the overall levels of IT literacy in the organisation. People are becoming far more comfortable with the usage of mobile devices for their day-to-day activity. We have become much more paperless in the organisation, far more instant in our ability to respond to each other and our customers," says Ms Bowman.

"We only had 300 people with mobile devices supported internally initially; we've got over 2,000 now. We only have 2,500 employees. This is also 24/7, so people can use it for communication; they can use it to access data about themselves and about the organisation at a time when they want to do that.

"If they don't want to do that during the course of the working day, they can do it within the comfort of their own home."

Wahanda, a European online marketplace and booking platform for beauty appointments, has experienced rapid growth over the past two years, and mobility and cloud-based apps have enabled it to scale without the growing pains that come with on-premise and traditional IT.

> **There will be scepticism this is just a commercial benefit to the organisation – it's important to hone in on how it can make their lives at work easier**

"In the past 18 months we have gone from being a relatively small UK-based business to being a company of about 450 people operating in a number of markets. We have acquired five different businesses in the last year," says Wahanda chief technology officer Simon Lambert.

"With all that growth comes all of those challenges around corporate infrastructure and intra-team communication. During this time we have chosen a lot of cloud-based solutions to ease that process, such as using Salesforce to mobilise and connect our sales team.

"If we had used a lot of traditional tools and built lots of stuff ourselves, there is just no way we could experience this level of growth in that short period of time. It allows you to move very, very quickly."

Although BYOD is becoming more widely adopted across enterprises, that doesn't meant it doesn't come without challenges. For example, Gatwick's Ms Bowman says that with hindsight she would have liked to have communicated the benefits more clearly to employees from the start.

"Communicating it well is critical because it is a change. People may not recognise that it's not just a new IT process or a new way of working; it's actually a fundamental change to the way individuals are operating in an organisation. You have to think about the impact on them, and on their way of thinking and their way of operating in the organisation.

"There will be scepticism this is just a commercial benefit to the organisation – it's important to hone in on how it can make their lives at work easier; how it can support them to communicate more effectively with each other, how it can speed up the way they access information and how it can improve their ways of working."

And an organisation has to change its expectations too; it's not just about employees. Microsoft's Mr Coplin hopes in the future, when companies adopt these "working everywhere" strategies, they realise it allows them to judge employees on the outcomes of their work.

"The challenge we have is that organisations typically measure people's performance based on the process they complete. Whether it's in terms of hours worked or forms filled, which actually prevents you getting to the benefit the technology has to offer," he says.

"What you have to do instead is go to a much more nebulous world of measuring the outcome of work, rather than the process. For example, Microsoft measures me on whether my projects are delivered on time, whether my customers are deliriously happy. Microsoft doesn't care where I am or when I work, but it will have a stern word with me if I fail on the outcome. That's a very different world where we have come from."

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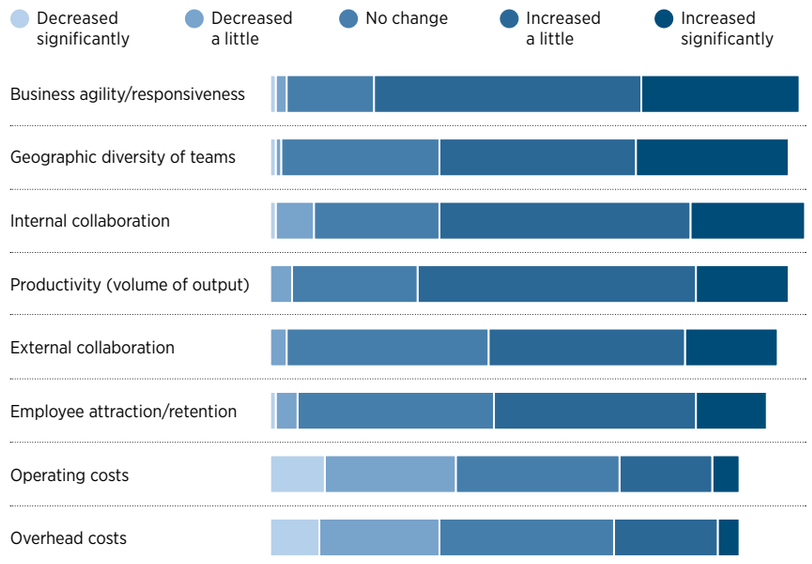
IMPACT OF MOBILE/REMOTE WORKING

Percentage indicating the effect of mobile/remote working on their organisation



Source: *Harvard Business Review* 2015

Now leaders are human first

Business hierarchies are changing along with the qualities needed to be a modern leader

◆ LEADERSHIP

● SAM SHAW

Newton Investment Management

Helena Morrissey, Newton Investment Management chief executive, featured in *Fortune* magazine's list of the World's 50 Greatest Leaders

Cast your mind back. From rock stars to royalty, the alpha dog at school to the athletes who inspired us; growing up, our leaders always seemed to be born rather than made – and they were also somewhat out of reach.

But the rose-tinted lenses are cast aside as our worlds become more interconnected; we are better informed, more empowered and challenging, demanding two-way dialogue from those in charge.

Organisational hierarchies are less fixed, less about command and control as they become more fluid and multifaceted. Our emotional quotient or EQ is now revered as much as our IQ.

Honesty, listening, empathy, humility and flexibility are seen as essential traits in today's leaders, as important as courage, confidence and decisiveness have always been.

Jutta Tobias of Cranfield University School of Management says the role of leader is evolving as the business environment becomes more complex.

"It is no longer about the lone male, John Wayne-style, big-jawed hero receiving applause for solving everyone's problems," says Dr Tobias.

"Leaders need to allow those around them to shine, stop being fearful of saying 'I don't know', and allow different voices and opinions to be heard."

No longer reliant on externally driven fear or admiration, tomorrow's leaders need to derive their satisfaction from completely different sources, looking inwards rather than outwards.

Dr Tobias says: "They are not only leading more complex dynamics, but doing so more publicly. Are they managing their emotions well enough? Are they respected? Are they being respectful?"

Modern leaders need to become trusted enablers of creativity and innovation for those they lead, and showing a well-regarded weakness or vulnerability seems to be criteria for garnering that trust.

In *Why Should Anyone Be Led by You?* authors Rob Goffee and Gareth Jones cite businessman and sometime national treasure Sir Richard Branson as exemplifying this, in turn cementing his authenticity.

"Branson is particularly effective at communicating his vulnerability," they write. "He is ill at ease and fumbles incessantly when interviewed in public. It's a weakness, but it's Richard Branson."

Traditionalists might view these more sensory characteristics as more at home in funky, youth-filled London creative agencies, all beer and bean bags, than the more "professional" sector, but Maggie Stilwell, managing partner for talent at EY, disagrees.

She says the introduction of flexible working three years ago has transformed the business.

"It used to be about following the mother ship of the office without thinking 'is that the right place for me to be to get the output I need today?'"

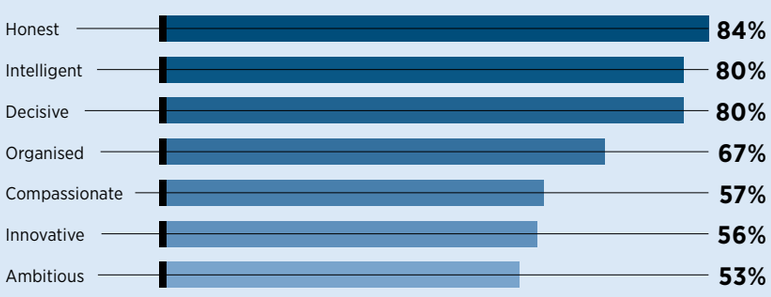
Are these softer, more touchy-feely approaches coming at a cost to the bottom line?

"No. We have seen a significant halo effect from doing something that is effectively logistical, a much bigger payback. We've realised if we drive engagement levels we also drive more growth, profits and higher staff retention," says Ms Stilwell.

So why bring our mentors and managers under such scrutiny? Are certain sectors daring to review their executive models and winning in doing so?

WHICH LEADERSHIP TRAITS MATTER MOST?

Percentage saying it is absolutely essential for a leader to be...



Source: Pew Research Center 2014

While certain professions – health, legal, accountancy and finance – generally demonstrate more resistance to change, the fast-moving consumer goods and retail sectors come across as more enlightened, he says.

Rather than being sector-focused, the size of the company is a more likely differentiator; smaller companies can be more nimble and try things out, while flatter structures are often more effective with fewer moving parts.

Arguably, if everyone is an ideas person with ambitions of leading, it might lead to top-heavy organisational structures with too few following. Do we risk making our worker bees redundant?

"In the UK we hardly manufacture anything anymore. We are a nation full of people with ideas and it is this intellectual capital that will be most important to the UK economy," adds Mr Grout.

He foresees a world in which the core functions still exist, but will gravitate towards outsourced services as companies employ more contractors and portfolio careerists become the norm.

In terms of remote working, the multinational opportunity that sits hand in glove with that and information overload, technology is behind much of this progress.

Chief executive of Newton Investment Management Helena Morrissey calls it the "game changer".

She is also chairwoman of UK asset management trade body the Investment Association, founded the 30% Club in 2010 with the objective of redressing the gender imbalance on FTSE 100 boards, is a mother of nine and recently appeared in *Fortune* magazine's list of the World's 50 Greatest Leaders.

Ms Morrisey agrees the concept of leadership has changed significantly from one relying on command and control to being more about influence and persuasion.

"Society and businesses are much less hierarchical and deferential – you don't get respect through a job title, but through what you do," she says.

"The universal access to information along with the ability to contribute to opinion, thanks to the internet and rise of social media, has been the game changer here. Leadership needs to feel local and personal, even if in practical terms that cannot always be the case, if the leader is to be trusted."

This comes back to Mssrs Goffee and Jones' idea of leaders managing their authenticity. Being seen to listen, communicate and empathise is instrumental in helping that cause.

Taking his local and personal leadership style more literally was former BBC director-general Greg Dyke, who ran the corporation from 2000 to 2004.

Having interviewed Greg Dyke on more than one occasion, Mr Grout says: "He took the view that leaders must first listen to earn the right to be heard."

Stepping into the shoes of John Birt, whose reputation for being autocratic and London-centric preceded him, Mr Dyke took himself in a different direction. Or rather, several different directions outside the M25.

"During his first 100 days in the post, he travelled to locations no director-general had ever been to before. He avoided the executive dining room, queued up with a tray at lunchtime and asked everyone the same two questions – name one thing we could do to improve our service to our audience and second, tell me one thing I can do to improve your life at work."

Within six months he reportedly had everyone in the organisation on side. "Very few leaders can say that," concludes Mr Grout.

> **Honesty, listening, empathy, humility and flexibility are seen as essential traits in today's leaders, as important as courage, confidence and decisiveness have always been**

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When it's alright to play at work...

Recruiting, training, motivating and retaining staff can be fun – when it's like a game

◆ **GAMIFICATION**

● **GABE ZICHERMANN**

My Marriott Hotel Facebook game enables prospective staff to feel what it's like to work at a hotel

UberDrive mobile game to engage current and prospective "driver-partners"

One of the most enduring challenges facing employers and employees alike is engagement. The difficulty of getting and keeping staff members aligned, focused and extraordinary has only been exacerbated by the growth of mobile and social technology. For example, British workers admit to spending an hour a day goofing off online between nine and five; as a self-reported statistic, the real number is likely to be even higher.

To drive engagement and compete with the endless distractions in the workplace, forward-thinking companies are embracing a novel approach called gamification. This is the use of game concepts for non-entertainment purposes. In this case, it's used to recruit, train, retain and engage staff across a wide range of industries and functions. In subtle and not-so-subtle ways, gamification is transforming the way we work.

Recruitment is a costly endeavour for most businesses, whether they must comb through thousands of CVs for lightly skilled work or dig deeply to find just the right in-demand software programmer in a super competitive landscape. Costs to recruit a highly skilled employee can routinely approach £100,000 and losing that person because they're ultimately a bad fit can easily double that.

So innovative companies are turning to the power of games to help find the right people and ensure they will be great long term. Among these is Marriott International, which built a game called My Marriott Hotel that enables prospective housekeeping and front-line staff to try out what it is like to clean at one of the company's global properties. Global transport app Uber built a game called UberDrive that lets you see if you have the right stuff to drive for Uber and learn how along the way. And pizza chain Domino's app Domino's Pizza Hero lets you make and bake your own pizza in the virtual world, and have it delivered to your door in real life.

While the games are fun in their own right, if you do well in the virtual world, they will invite you to apply for a real job. The theory is that your performance in the game is predictive of your success at work and these games are a great recruiting tool for the millennial generation.

And what about those higher-skilled information workers? Leave it to the Danish LEGO company to run arguably one of the world's most fun gamified recruitment programmes. Each year prospective designers are invited to submit videos of themselves making new LEGO creations and the best are invited to a special design game day at headquarters. There, designers are challenged to complete puzzles, build under pressure and work together in spontaneous teams in ways that are not dissimilar to recruitment game shows such as Gordon Ramsay's *Hell's Kitchen*, but with less swearing and yelling. The best are invited to join the highly secretive and incredibly sought-after LEGO design team in Billund – the dream job for any grown-up kid.

Once you've won the game to get in the door, the workplace of the future also has some great gamified surprises in store to help you learn and train on the job. While most corporate training programmes tend to be boring and underutilised, they are nonetheless crucial to both employers and employees looking to increase skills development.

But how to get people to learn more? Delta Airlines have decided to change the paradigm by converting large swaths of their training programmes to be game-based. Their app, Ready Set Jet, allows their 80,000 global employees to learn about their jobs, systems and the Delta way through a series of mini games. The application has been so successful that employees have completed four times the amount of training normally required of their own volition and on their own time.

If you work for a financial services firm in the UK, you will probably have played a compliance game in the last few years designed by startup True Office. The anti-bribery and anti-corruption game puts players in various situations, and asks them to take actions that help explain legal risks and compliance in a constructive way.

Also recognising the opportunity to generate better results through gamification, McDonald's launched a Till Training Game to teach thousands of UK employees how to use their new point-of-sale system, at the same time generating a real buzz and excitement. In every case, the gamified learning system improves dramatically on the old way of reading a manual while also driving better results through greater learning.

Engaging employees in their core job and retaining the best staff are among the most complicated things in today's economy. So just as with other aspects of work, gamification is promising to change the landscape for how we interact on the job. The Department for Work and Pensions understood this some years ago while trying to unlock greater innovation in this large government sector. Called Idea Street, the project aimed to get staff to share ideas for innovation, cost-savings and efficiency by ensuring a diverse range of voices were heard.

In an environment not always known for openness and forward thinking, Idea Street created a virtual stock market for innovation where any staffer could propose an idea to management. These ideas then became equities that other employees could buy and sell using virtual currency, the highest price stocks effectively being the most popular ideas. In the first 18 months, more than £90 million was saved using the programme and it received broadly positive reviews from employees who felt like they were truly heard.

> **Innovative companies are turning to the power of games to help find the right people and ensure they will be great long term**

Another workplace function receiving a makeover from gamification is travel expenses. Companies such as Google and startups including Rocketrip are using gamification to encourage employees to spend less on the road while still hitting corporate objectives. They do this by treating any money saved over baseline as points that staff can redeem for cash, charity or to use for a future trip. In a nutshell, if you save money, you can reap some of the benefit instead of turning them over wholesale to the company. As with much of gamification, success is predicated on creating a win-win for employees and employers.

Gamification has shown tremendous promise and continues to grow as a top strategy for human resources leadership in the UK and around the world, but some critics argue that it over emphasises rewarding people for things they should be doing anyway. Why should you incentivise staff to do their jobs when their salary and personal satisfaction should be sufficient?

Of course, gamification isn't a panacea for workers who genuinely don't want to contribute or companies with terrible work environments. These must be structurally addressed for gamification to work. However, with ever-increasing competition for the best employees and endless distractions from smartphones and social media, savvy employers are using the power of games to make the workplace more fun and engaging. This emphasis on better recruitment, training and engagement is truly transforming the jobs of the future – and fun's the name of the game.

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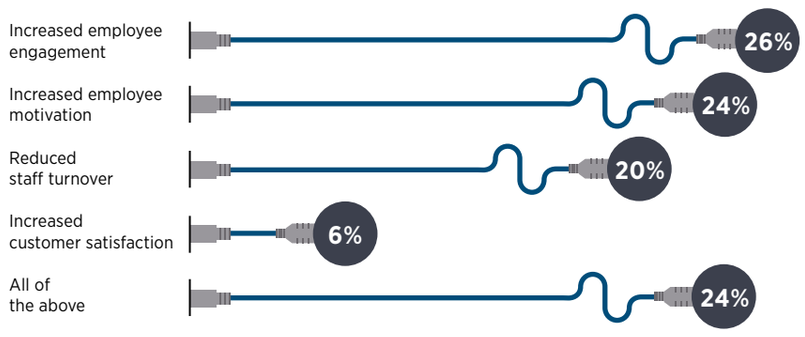
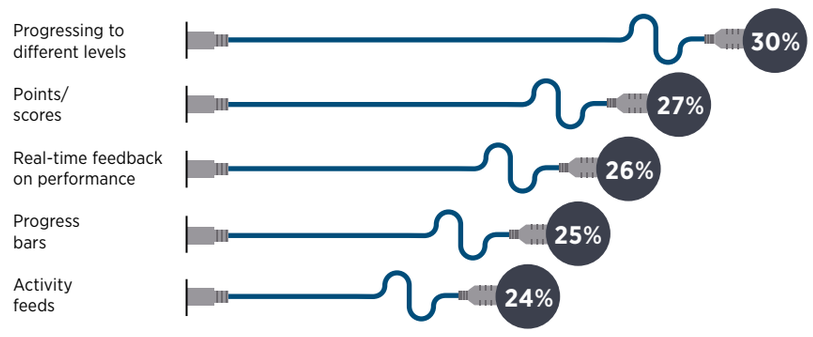
REASONS TO IMPLEMENT GAMIFICATION

Asked of firms not currently using gamification



Source: Sunrise 2014

MOST PREFERRED GAMIFICATION TECHNIQUES TO ENGAGE EMPLOYEES



Source: TalentLMS 2014