

### A report by BrightHR

In collaboration with Lynda Gratton, The Hot Spots Movement & Futurist David A.Smith



### **Contents**

### **Foreword**

- ★ BrightHR
- \* Lynda Gratton

### The future of technology

- \* The multitasking myth
- \* The importance of data
- \* Keeping up with the pace of change

### **Complexity in the workplace**

- \* Processes and productivity
- \* Removing processes altogether
- ★ Self-service HR

### The dimensions of diversity

- \* Demography and job design
- \* The freelance revolution
- \* Diversifying processes

### Disappearing middle skills roles

- \* The emergence of non-linear progression
- \* Creating new career paths
- \* 100 new future job roles

### **Keeping Compliant**

- \* Evolving regulation around social media
- \* Keeping pace with educated employees
- \* Empowering managers to deal with compliance

### **About the authors**

- ★ BrightHR
- \* Lynda Gratton
- ★ The Hot Spots Movement
- \* David A. Smith

### **Become a Bright Partner**



### **BrightHR Foreword**

What will the future of work look like, and what trends are emerging that that will bring us to that conclusion?

Furthermore, how will technology affect these trends and will it be in a positive or negative way?

These are just a few of the questions answered in our report, 'A Future that Works', which has been compiled with help from world-leading experts in their fields, including Lynda Gratton, professor of management practice at London Business School; The Hot Spots Movement, a specialist research and consulting team founded by Lynda and David A.Smith, a futurologist and chief executive of strategic futures and research organisation, Global Futures and Foresight.

At BrightHR, we're absolutely committed to helping you and your clients succeed in the workplace.

To grow and prosper, businesses large and small must be prepared to embrace new trends, strategies and technologies. By producing 'A Future that Works', we hope that you'll gain a better understanding of how best to prepare for the upcoming workplace changes, providing solutions that will ensure you and your clients have a bright future.



### **Lynda Gratton Foreword**

Organisations, large and small, are facing disruption. It is increasingly clear that ways of working that have enabled success in the past will not necessarily deliver the same results in the future. Based on my research with more than 90 of the world's leading multinational companies, there are several trends that organisations must monitor in order to future-proof their success.

Perhaps the most profound disrupter of current work practices is technology. While the tech-enabled workplace has had some exceptionally positive impacts, such as freeing us to work from anywhere and access the latest information in real-time, it has also resulted in an environment full of distraction. Employees overwhelmed with instant messages, alerts and overloaded email inboxes are now facing a productivity crisis. The challenge for organisations is to ensure they have the right technology in place that streamlines communication, places power in the hands of the individual and delivers only the most pertinent information rather than endless irrelevant distraction.

In addition to the influence of technology, employees are also navigating more complexity than ever before. With even the smallest of companies now able to operate worldwide, people are tasked with coordinating between time zones, collaborating across cultural boundaries

and managing networks of non-traditional workers, such as freelancers. The organisational response to this has generally been to build in more processes, which can serve only to make matters worse as people devote valuable time to cumbersome administrative tasks.

The most successful organisations in the future will be those confident enough to remove processes that do not add value, simplify the context of work and ensure that their workforce are able to devote their time and energy to the value-adding activities that really underpin performance. This challenge will be exacerbated by the ever-increasing burden of compliance on organisations as governments try to respond to the new reality of work, complete with rules governing the use of social media, employee data and socially responsible reporting. In this environment, business support functions will need to stay abreast of developments and be adept at translating these into the implications for their organisation.

It is my hope that the research in this report will provide the first step for many organisations as they endeavour to meet the challenges ahead. Armed with the latest insights, organisations can ensure they benefit from the disruption and capitalise on the abundant opportunities that lie ahead.





### The future of technology

Technology is one of the predominant forces shaping the way we work, with profound implications for businesses and employees. As it evolves, so will the role of business support functions in relation to technology. Businesses now have a responsibility to facilitate the use of the right technology, which will enable employees to access the information they need when they need it and to organise their working lives when, where and how it suits them best.

The Hot Spots Movement has identified the following key technology trends expected to shape the direction of businesses over the coming years.

### The multitasking myth

According to Daniel Levitin in The Organised Mind, today's workers are exhausted by the sheer volume of information their use of technology requires them to process – and it's the job of an organisation's support functions, including finance and HR departments, to minimise the detrimental effect this has on their ability to perform in the workplace.

The average employee's work is interrupted – by emails, instant messages or social media alerts – once every 10.5 minutes¹, and it can take up to 23 minutes to refocus on the task at hand. A top neuroscientist believes there is a 'cognitive cost' of rapidly switching from one task to another, which, in turn, affects both performance and the way in which we measure and coach for performance.

The disruptive effect of technology on employee performance is only likely to get worse. The Future of Work Research Consortium's 2015 Gen Z Survey, which polled 11-18 year-olds around the world, revealed that 74 per cent of young people feel a lack of

focus is the biggest disadvantage of technology while 51 per cent see it as a source of stress.

Ironically, despite being part of the problem, technology is also an essential part of the solution. It's all about using the right technology, which will filter out distractions and simplify work. Businesses must ensure employees have intuitive technology that i) enables them to perform at their best and ii) ensures they can quickly and easily manage potentially time-consuming tasks, like requesting annual leave and submitting expenses, freeing them up to focus on more valuable activities.

### What our futurist says:

An automation revolution is underway, with one third of UK jobs over the next 20 years under threat from this technology, including those in exclusive professional services.

However, there is a chance these technologies will enhance rather than replace increasing amounts of non-routine work. Some 58 per cent of business executives think automation actually improves the creative thinking of their employees<sup>2</sup> while 80 per cent say artificial intelligence improves worker performance.

Automation will improve business efficiencies while reducing head count and time spent dealing with routine issues, but it will require a radical shift in business models, digital literacy and the introduction of new processes. Avatars, robots, algorithms and personal assistants – and the people supporting them – will be essential members of tomorrow's workforce.



## "An automation revolution is underway, with one third of UK jobs over the next 20 years under threat due to this technology, including those in high end professional services"

### The importance of data

As our workforces become increasingly diverse, data analytics will be vital in helping us to understand how we can attract, manage, engage and retain talent. A business's HR strategy should therefore include a commitment to data-driven solutions.

According to Deloitte's Human Capital Trends Report 2015, 66 per cent of companies think people analytics are important, but only 35 per cent feel ready to make use of them, mainly because HR departments could become overwhelmed by the vast volume of data they could generate.

To speed up access to analytics, Hot Spots suggests businesses work on building strong relationships with data-savvy stakeholders, forming strategic partnerships with technology companies and engaging with more analytical internal departments, such as finance.

### What our futurist says:

Huge amounts of data will be generated in the future. By 2020, the amount of data that customers produce will be 100 times the total accumulated in data warehouses today<sup>3</sup>, with mobile data alone expanding sixfold<sup>4</sup>. It is crucial for

businesses to develop streamlined, digital services allied to efficient analytics that deliver real insight.

The notion of 'mobile' will further change to include the \$74bn wearables (technology worn on and in the body) market of 2025<sup>5</sup> and the projected 50 billion plus IoT (Internet of Things) connected devices (the network of physical objects or things embedded with electronics, software, sensors and network connectivity that enables these objects to collect and exchange data). And as the wider world changes, so do skill requirements, with 86 per cent of business decision makers stating that knowledge workers will need to become 'data geeks<sup>6</sup>.

Leadership in the increasingly distributed and virtual workplace will require new investment in areas like virtual reality and collaborative on-line spaces. Distributed workers require specialist technologies to collaborate and engage in meaningful ways, as do managers overseeing remote staff. The wider technology ecosystem must therefore expand, and we need to recognise that we are entering the post-email era, where collaborative tools like Yammer hold sway.

### Keeping up with the pace of change

Tools and devices can become obsolete within six months, so it no longer makes sense for organisations to invest in expensive programs and platforms that will soon be out of date. Many are already abandonina traditional in-house platforms in favour of cloud-based services, an industry that is experiencing phenomenal growth, tripling in value from \$46 billion in 2008 to \$150 billion in 2014. Having put to rest qualms about security issues, organisations wishing to stay ahead of the curve, while avoiding significant investments in IT infrastructure, will place increasing importance on cloud solutions.

### What our futurist says:

Organisations that can quickly integrate digital technology can typically increase revenue and productivity by nine per cent and lower talent and HR costs by seven per cent. First of all, there must be acceptance that it's hard to keep up with the pace of change in technology.

Having the confidence to disrupt your own business model through strategic use of technology will become a key marker of future success, and the only real way of achieving this is through continuous reskilling. Yet only 19 per cent of organisations have introduced digital skills training<sup>7</sup>, even though the benefits of developing digital literacy are considerable.

Interestingly, with increasing IoT and wearable capabilities, it is likely that the wellbeing of the workforce will become a standard KPI, with sensory technology tracking health, emotions and mind-set likely to become mainstream before 2025. The burgeoning IoT/wearables intersection could also radically alter the job of education by pinpointing areas of specific employee weakness and then suggesting and implementing courses of action to remedy the issue. In addition, brain to machine interfaces are expected to mature around 20278, opening up a whole new area for HR and repositioning it as a strategic driver of performance.

### "Organisations that can quickly integrate digital technology can typically increase revenue and productivity by nine per cent"





### **Complexity in the workplace**

Many of today's businesses – both large and small – are global and diverse, working across different time zones and with stakeholders from multiple backgrounds. While this is a mainly positive development, the negative side is that expansion has left lots of organisations burdened by a complex web of processes.

### What our futurist says:

The complexity of the global business environment has increased by a factor of 20 in the last 25 years. Mergers and acquisitions are forecast to rise to \$2.7 trillion in 2015, \$3 trillion in 2016 and \$3.4 trillion in 20179, adding further complexity to already tangled organisations (two thirds of mergers fail because they concentrate on economic metrics, not people or culture).

At the heart of this complexity lie business support functions, such as finance and HR, which are often the source of the processes employees find so difficult to navigate. From expense claims and absence requests to performance management processes, managers and employees find themselves weighed down with the bureaucracy imposed on them.

### **Processes and productivity**

One of the problems arising from organisational complexity is the amount of time and energy employees, particularly managers, spend navigating these processes rather than concentrating on their core work.

Research from Birkinshaw and Cohen reveals that many managers only spend 12 per cent of their working day on

external or client work and a further 12 per cent on team management, while 76 per cent is swallowed up by desk-based work. The cost to businesses can be significant: for example, Deloitte lost 20 million hours per year on performance management processes that weren't even working effectively.

As technology continues to develop and organisations become even more global, complexity will only increase, and support functions must ensure processes are as simple as possible. Currently, only 10 per cent<sup>10</sup> of firms have major simplification programmes in place, but it is encouraging to note that 44 per cent have some activities in place and a further 22 per cent have simplification plans underway.

### What our futurist says:

Some 67 per cent say simplification will become strategically important to their business within three years<sup>11</sup>, and this will only increase beyond 2018 as the forces driving complexity remain. There will be little time to change the underlying systems, so organisations are likely to have to 'bolt on' new processes, channels and technologies to survive.

Automation will play a key part in simplifying how staff engage with the organisation. CEOs are expecting around a fifth of their workforce tasks to have an element of robotics in them by 2020<sup>12</sup>, which will be used in both the front and back end. For example, according to Gartner, by 2020 the customer will manage 85 percent of their relationship with an enterprise without interacting with a single human being.



## "According to Gartner, by 2020 the customer will manage 85 percent of their relationship with an enterprise without interacting with a single human being"

### Removing processes altogether

Faced with the problem of coping with complex processes, some companies have decided to get rid of them altogether – with mixed results. Many leading companies, including Virgin, have got rid of their annual leave policies, but the result has been employees less willing to take leave. This shows processes can provide a way to gauge what is acceptable, and without signals in place, people find themselves at a loss.

What this tells us is that businesses dealing with complex processes should eliminate the pain of them while continuing to provide employees with much-needed structure. Technology can facilitate this, with easily accessible systems that allow employees to enter a single portal to access the information they require and submit any requests, claims or feedback and then alert key stakeholders to any pending actions.

### What our futurist says:

Research from Oxford Martin suggests that current job functions of accountants and those working in insurance, law and other stable professions stand a very high chance of being fully automated by 2030<sup>13</sup>. Cognitive systems able to infer and learn, such as IBM's Watson, already deliver a 40 per cent reduction in search time for staff seeking information from within the firm<sup>14</sup>. And, by 2020, 92 per cent

of call centres could be run by software with automated translation and learning capabilities operating animated avatars that interact in a near-human way. Other sectors are using predictive analytics – the ability to spot trends in data and form future plans – to make better offers to customers or identify potential savings.

Such cognitive (human-like) systems could also help employees by scanning huge volumes of data and then delivering the relevant information to the right person at the right time, enhancing worker productivity by allowing efficient access to internal and external data.

The prospect of fully automated factories, with sourcing, distribution and supply chain issues dealt with by machine-to-machine communication, is probable within the decade.

Away from the factory floor, only 25 per cent of executives say their employees are able to extract relevant insights from data<sup>15</sup>. Virtual personal assistants and cognitive systems are helping to change this; doctors, economists, medical researchers and lawyers are all using some variant of artificial intelligence to search for information, spot trends and anomalies and even detect health issues in employees.



### "Deloitte lost 20 million hours per year on performance management processes that weren't even working effectively"

### **Self-service HR**

Employees' consumerist attitudes are now spilling over into the world of work where they have the same high expectations of service. If there is not a rapid, efficient response from internal services, such as IT, finance and HR, they can become frustrated and disengaged.

To measure up to these expectations, intuitive technology that simplifies the context of work and reduces the amount of time wasted on administration will be essential. Some 18 per cent of companies surveyed in Harvard Business Review's 2014 Visier Report were already making use of technology to deliver on-demand user self-service processes while 42 per cent said they would be doing so within two years. This approach simultaneously improves employees' experience of HR and finance initiatives while also liberating them from administrative tasks that distract them from their core work.





### The dimensions of diversity

### Demography and job design

In today's workplace, diversity operates along two dimensions, the first being demography and the second being diversity in job design and working arrangements with the rise of freelancers and portfolio workers. The types of people at work have never been so diverse, with individuals from different generations, gender groups and cultures working side-by-side in the same organisation.

### What our futurist says:

By 2020, 36 per cent of the UK working population will be aged over 50<sup>16</sup>. By 2028, a quarter of UK employees could be working until they are 70. Of course, this puts increased onus on technology as a way of continuously updating skills, as well as facilitating collaboration between generations with very different communication styles and preferences. Since switching off some of the 200 genes that control ageing could enhance life spans by 60 per cent<sup>17</sup>, it is not unreasonable to expect average lifespans to hit 120 by 2025<sup>18</sup>.

By 2020, developed world life expectancy is expected to increase by 0.5 years thanks to widespread adoption of wireless health monitoring technology<sup>19</sup>, which is now becoming more capable. In fact, some prototypes can now scan saliva, blood flow and heartbeat and even determine your happiness, creating the prospect of wellness and health preservation that could be a perk for employees and a source of cost savings for employers.

More generally, robots and automation could be used to augment the physical and mental capacities of workers, especially older ones. Diversity might then even advance to include the consideration of robots' rights, as well as the category of machine-enhanced human workers. Brain-to-brain communication, estimated to be scientifically viable in 2025 and commercially so just two years later<sup>20</sup>, could radically redraw work practices. Whether through implants (the next evolution of wearables) or artificially raising cognitive abilities, the fusion of man and machine will challenge current ideas surrounding diversity. Indeed, those left behind in the robotic revolution and who end up unemployable in the new economy, could require significant government assistance and form a special grouping required to be employed by firms - the 'social employee'.

More recently, diversity in job design and working arrangements has begun to emerge. From working couples who take it in turn to prioritise work and family responsibilities, to the 16 per cent of workers globally who choose to freelance, we are seeing huge shifts in how people engage with both work and the organisations they work for. Employers must adapt to an environment in which the skills, motivations and contractual preferences of workers are less homogenous than ever; coordinating with this web of stakeholders will be a huge challenge in the coming years.

This diversification of diversity, if you will, has introduced yet another layer of complexity, and businesses must develop an understanding of the many different people working for them and which systems can best support them.

<sup>16</sup> HR Review 17 Buck Institute for Research on Ageing 18 Professor Sir Colin Blakemore 19 Gartner 20 Policy Horizons Canada and Michell Zappa of Envisioning

# "Freelancing is by far the biggest shift affecting workplace diversity. The International Data Corporation estimates that the global number of non-traditional workers, including freelancers, contractors and consultants, will hit 1.3 billion by the end of 2015"

### The freelance revolution

Freelancing is by far the biggest shift affecting workplace diversity.

The International Data Corporation (IDC) estimates that the global number of non-traditional workers, including freelancers, contractors and consultants, will hit 1.3 billion by the end of 2015.

It is now increasingly appealing to those wanting a high-performing career. Elance, an online staffing platform, says 87 per cent of students with honours degrees see freelancing as a 'highly attractive' career, and 21 per cent of graduates with first class honours degrees are already freelancing. This is turning the traditional model, in which employment in a large organisation was seen as the most desirable career option, on its head.

Elance also reveals that 46 per cent of companies already use freelancers. Businesses must therefore reassess their relationship with them. For example, companies may need to adjust the ratio of freelancers to permanently employed staff if some of the best emerging talent opts to go freelance, embedding them more into the business rather than leaving them on the fringes.

### What our futurist says:

Businesses should increasingly examine where their boundaries end and whether they are prepared to extend internal social networks, such as Yammer or Facebook, to collaborating third parties. A third of large organisations say they engage SMEs to supplement their skills and expertise with 91 per cent of research and development professionals saying this is particularly important when they are looking for innovation in their products and services<sup>21</sup>. The number of such experts is likely to grow by one million, to a total of six million in Britain by 2020, by which date 40 per cent of the US workforce could already be contract-based<sup>22</sup>. By the same date, 40 per cent of the world's graduates will come from India and China alone<sup>23</sup>, and by 2030, 27 per cent of all 25-34-year-olds with a degree will be in China, 23 per cent will be in India, and eight per cent in the US<sup>24</sup>.



## "Virtual reality will redraw the remote work experience significantly throughout the coming decade – a game changer in all forms of communication as profound as the birth of the Internet"

### **Diversifying processes**

With diversification, businesses will increasingly find their tried and tested processes under strain; they must incorporate freelance workers into the organisation without reducing levels of collaboration and in-person communication. Furthermore, all internal processes, such as payroll, must also accommodate them.

To support this, businesses should invest in technology that breaks down barriers between diverse workers. In The Hot Spots Movement's 'New Ways of Working Jam', 80 per cent of respondents said they felt social tools would eventually replace email as the main mode of communication. The advantage of such tools is that they enable many-to-many communication, making it easier to share knowledge and data; this would also make it easier for organisations to include freelancers in collaborative work while maintaining security and control.

### What our futurist says:

As work becomes more dispersed and global, the need for seamless communication becomes increasingly important. Franz Och, Google's head of translation services, estimates it could be only a few years before speech-to-speech translation could work reasonably well. Linguistic, cultural and geographical diversity and dispersal will require emerging technologies to facilitate communication across borders, rationalise the information flow and help to create a feeling of community amongst dispersed workforces immersed in vastly different cultures.

Using virtual teams can improve employee productivity; some organisations have seen gains of up to 43 per cent – and this using relatively day-to-day technologies. VR (virtual reality) technologies now let you feel as if you are in the same room with people who may actually be spread across the world. There are several maturing technologies, such as haptic (feel the virtual object) interfaces and 3D interactive holographs (floating in the air images) combining with VR. It will redraw the remote work experience significantly throughout the coming decade - a game changer in all forms of communication as profound as the birth of the Internet.





### Disappearing middle skills roles

As technology shapes the way we work, it also shapes the type of work available. While the most obvious effect has been the taking over of repetitive tasks by machines, one of the more surprising consequences has been the disappearance of middle-skilled roles. From 1980 to 2005, some types of middle-skilled jobs saw a decline of up to 54 per cent, and over the same period, low-skilled service jobs and high-skilled managerial and professional work increased by 30 per cent.

### What our futurist says:

As a result of advances in machine learning and the increasing use of Natural Language, the task of interrogating large amounts of data and deriving meaningful answers, currently the province of the data scientist<sup>25</sup>, will be undertaken by lower-qualified staff and ultimately fully automated. This progression makes jobs with any systemic component ultimately vulnerable to automation. In fields such as law, accountancy and medicine, machines are likely to produce '...generally better answers,' than humans, who struggle to keep up with the latest knowledge in their fields, says James Manvika, a director at McKinsev Global Institute.

This trend is likely to become even more pronounced over time, with Oxford University predicting that 47 per cent of jobs in the US and a third of those in Europe will be replaced by technology within the next two decades. According to Boston Consulting Group, investment in robotics sees a sharp increase when a machine or platform becomes 15 per cent cheaper than a worker. In the US, this point has already arrived: the cost of operating a welding machine for an hour is now \$8 while the cost of employing a

worker for the same period is \$25. With middle-skilled roles being replaced by technology or off-shored, the neat pattern of linear career progression is becoming a thing of the past. Individuals now need to think more creatively about how to achieve career progression, and organisations must reassess how they find talent.

### The emergence of non-linear progression

With the decline of middle-skill roles – also known as the hollowing out of work – workers may now find the 'rung' above their current role no longer exists, leaving a huge gap between their role and business leadership.

At the same time as replacing jobs, technology is set to deliver greater choice and job opportunities for many people through the deployment of on-line talent platforms. Operating on a global basis, these platforms will offer well-qualified and experienced people great working opportunities in emerging and booming economies all over the world. As a result, the career ladder may begin to look like a career web.

Without middle management roles to progress to, what will workers do? One option is to opt for a sideways rather than upwards move, allowing individuals to increase skills and build their experience in spite of the lack of available middle management roles. Moving between companies, particularly moving to ones of different sizes where the same role encompasses a different range of responsibilities, is another form of

non-linear progression. The ultimate implication is that workers cannot now expect to gain seniority by moving 'up', but rather by gaining additional complex skills.



### **Creating new career paths**

What this suggests is that organisations can no longer hope to source their next generation of leaders from a pool of leaders-in-waiting. Instead, they will have to start looking further afield, developing a talent acquisition model that relies more heavily on seeking the right skills than the right experience. Managers and recruitment professionals alike will need to identify people who fit opportunities in terms of their aptitudes rather than previous experience.

With the upward movement of the career ladder so embedded in the psychology of many organisations, this will be a major shift. Companies must navigate this by replacing the progression model based on promotion with one based on learning and development, which allows employees to enhance and renew their skills. To support this, they should enhance the learning and development they offer, from in-house training and role-specific development that allows employees to make lateral moves, to providing access to courses that result in formal qualifications.

### What our futurist says:

The notion of 'the quantified self,' the ability to measure every aspect of ourselves, will become increasingly common in everyday life. The fitness apps that calculate calories burned, amongst other metrics, will evolve and become prominent in all fields. Having more information about ourselves will also enable employers to pinpoint areas of educational weakness and will allow workers to remedy them by using virtual personal assistants to access relevant information.

As the world of work becomes ever more complex and marked by soft skills, learning and attainment will not be answered by standard degree courses. Specific books, meeting certain people or working abroad as an apprentice will be key remedies, suggests futurist Thomas Frey<sup>26</sup>. Several human characteristics and abilities are in no way captured or demonstrated by traditional educational attainment, and it is therefore hard to match to jobs that are often reliant on such soft skills. Many characteristics are currently too nuanced to be recorded, and we have no system to measurably improve or rate them. The great promise of the Internet of Things and the quantifiable self is the possibility of doing just that. A system that enables better attribute matching, as well as improving aspects of work skills neglected by universities and schools, could empower workers and enable a more agile approach to learning and on-the-job education. It's this very humanness that will make us valuable employees and contractors in the future.

### "Without middle management roles to progress to, what will workers do?"



26 Impact Lab

### "Social networks would appear to be the most promising avenue for tapping alumni talent"

While the job for life may be dead, the broken career ladder means that companies will start building lifelong alliances with high-performing talent. Businesses may therefore need to reconsider how they engage with employees choosing to leave to further their careers. Rather than it being the end of their relationship, businesses should keep lines of communication open as a way to leave the door open for such individuals to return, either as full-time employees or freelancers.

### What our futurist says:

Social networks would appear to be the most promising avenue for tapping alumni talent. Social could add up to \$1.3 trillion of additional economic value per year by 2025, with two thirds of that coming from improved collaboration between and within companies. All told, this could raise productivity per knowledge worker by 20 to 25 per cent<sup>27</sup>. The progression of automation from the replacement of manual, clerical, managerial and now professional labour can be seen as one long continuum. Whilst job substitution by machines is always alarming for those caught up in it, we know, from experience, that we have hitherto been able to adapt and find new roles for ourselves.

The following list shows a myriad of potential new roles for us to engage in.



### 100 new future job roles

### Information and communications<sup>28</sup>



- \* Complexity Analyst / Gaiantologist
- Personal Entertainment Programmers Psycho-Customizer
- Human to Machine Interface Controller
- \* Narrowcasters
- \* Data Miner
- Waste Data Handler
- Social Network Analysts
- In-House Simplicity Experts
- \* Privacy Protection Consultants
- \* Complex Security Integrators
- \* Chief Networking Officer
- \* Virtual Clutter Organizer
- \* Machine Linguist
- Off-the-Grid/off-the-Net Facilitator
- \* Quantum Computing Specialist
- Media Ethicist
- Designer of Advanced Interfaces for Ambient Intelligence systems
- \* Knowledge Guide
- ✗ Knowledge Broker
- Professional VR Citizen
- ⊁ Virtual Lawyer
- Virtual Property / Home Owners' Association (HOA) Managers
- Intelligent Agent Designers and Managers
- Avatar Manager / Devotees
- Network Relationship Counselors / Therapist / Designer
- Virtual Police
- Virtual Personal Shopper
- \* Cybrarians
- \* Holographer
- \* Virtual-Reality

### **Robotics**



- \* Robot Designers / Trainers
- \* Robot Mechanic
- \* Robot Counselors
- Dirigible Pilot
- \* Alternative Vehicle Developers
- \* Teleportation Specialists
- \* Solar Flight Specialists
- \* Infrastructure Specialists
- Monorail Designer

### **Space**



- \* Spaceline Pilots
- \* Spaceport Designers
- \* Space Tour Guides
- \* Space Architect
- \* Terraformer of the Moon and Other Planets
- \* Astrogeologists, Astrophysiologists and Astrobiologists

### **Demographics**



- Population Status Manager
- Personal Learning Programmer
- \* Societal Systems Designer
- \* Social 'Networking' Worker
- Intelligent Clothing Designer / Engineer
- Ghost Experience Assistant Personal Branders
- \* Socialization/Culturalisation
  Therapists
- \* Enhanced Games Specialist



### **Energy**



- \* Biorefinery Operative
- ★ Wind Farmer
- \* Battery Technician
- Insect-Based Food Developers, Chefs, Nutritionists
- \* Chlorophyll Technician
- \* Fusion Engineers

### **Environmental**



- \* Resource Use Consultant
- \* Vertical Farmers
- Climate Change Reversal Specialist
- \* Drowned City Specialist
- \* Quarantine Enforcer
- \* Experimental Petrologist
- In-Company Sustainability Coordinator
- \* Weather Modification Police
- \* Consumer Energy Analysts
- \* Water Traders
- Desert Land Rights Trader
- Climate Change Compliance Auditor
- \* Business Consultant for Climate
- \* Change Compliance
- Recycling Analyst

### Medicine, biology and biogenetics



- Genomics Developer/ Architect / Baby Designer
- \* Body Part Maker
- \* Personal Enhancement Advisors
- \* Nano-Medic
- Synthetic Life Designer / Scientist / Engineer
- \* Chief In-Company Health Enhancement Officer
- X Telemedicine Technician
- \* Pharmer of Genetically Engineered Crops and Livestock
- \* In-Company Gene Screener
- \* Biometric Identification Specialist
- \* Bioinformationists
- ★ Geomicrobiologists
- Experimental Therapy Experts
- Old Age Wellness Manager
   / Consultant Specialists
- Personal Body Weight / Obesity Consultant
- Memory Augmentation Surgeon 'New Science' Ethicist
- ★ Genetic Hacker
- \* Longevity Providers
- \* Cryonics Technicians
- \* End-of-Life Planner







### **Keeping compliant**

### **Evolving regulation** around social media

Once a word associated primarily with financial services, compliance has become an everyday concern for many organisations. In Australia alone, Deloitte found one in every 11 people works in a compliance role, demonstrating the growing need for expertise in this area<sup>29</sup>.

Many organisations now operate globally and deal with regulation in multiple jurisdictions - for example, organisations operating in the EU must comply with regulation around the use of website cookies while the US has stringent compliance rules around financial products - so keeping up-to-date with compliance issues is essential.

Companies must deal with evolving regulation around social media use, the living wage and on-line privacy. Governments have shied away from regulating social media since this would have huge implications with regard to issues that many hold dear, such as freedom of speech and expression. In the absence of sufficient legislation, many companies have opted for a blanket approach. A 2015 survey conducted by the US Investment Adviser Association, ACA Compliance Group and OMAM revealed that 89 per cent of firms have formal written policies to govern employee social media use and 47 per cent prohibit the use of social media for business purposes. In a world where social media is becoming an increasingly dominant part of sales, marketing and customer service, increased regulation may be the only way to strike the right balance between competitive advantage and vulnerability.

### What our futurist says:

This could provide an opportunity to innovate. When 600 company directors were asked whether 'governance should focus as much on enabling innovation and taking useful risks as on managing and mitigating risk,' over 93 per cent agreed<sup>30</sup>. This might involve engaging specific expertise, encouraging innovative behaviours or growing the skills required in the workforce of the future<sup>31</sup>. For example, 80 per cent agreed that the compliance function's ability to predict and avoid reputational damage and financial crime can deliver competitive advantage for banks<sup>32</sup>. Or advances in neuroscience and wearables measuring happiness, engagement and mood could soon combine to indicate when an employee is more likely to act against the interest of the organisation.

In the near future, companies may also have to deal with compliance issues stemming from the growing freelancer economy. In the UK, for example, the IR35 tax legislation against 'disguised employment' dictates that contractors working for the same employer for more than 24 months are to be considered employees for tax purposes. As freelancing and contracting become increasingly mainstream, such legislation is likely to increase in quantity and in sophistication.

The emergence of artificial intelligence will also lead to an increase in regulation, with legislation, for example, about how humans and robots interact in the workplace.



## "The emergence of artificial intelligence will also lead to an increase in regulations, with legislation, for example, about how humans and robots interact in the workplace"

### What our futurist says:

Compliance using predictive algorithms and machine learning could significantly reduce the risk of accidental non-compliance as well as more malicious attempts. The same technologies could also update employees on their compliance requirement via their virtual personal assistant or avatar.

### Keeping pace with educated employees

One key challenge is that many employees know more about their rights than their employers do. Furthermore, if employees feel these rights are being breached, it can lead to grievance procedures and costly litigation.

Data compiled by ACAS reveals that, in the UK, such action is on the rise. Between 1998 and 2004, the number of strikes tripled. Individual disputes have seen an even sharper increase: 20,000 Employment Tribunal applications were filed in 1972 and 130,000 by 2006. It demonstrates that today's employees

are far more willing to assert their rights by taking legal action. UK government data also shows a sharp increase in the number of multiple employment tribunal claims, although they have stabilised due to cutbacks in UK legal aid services.

### Empowering managers to deal with compliance

While employees may be adept at staying informed about their rights, managers in particular can struggle to keep up with the latest regulations and balance the need for compliance with strategic aims.

### What our futurist says:

This too could change. As soon as 2017, 75 per cent of large enterprises could receive custom threat intelligence information tailored to their industry, company, brand and environment<sup>33</sup> thanks to predictive analytics and cognitive computing. These technologies could also streamline internal operations – 61 per cent of knowledge workers regularly access four or more systems to get the information they need to do their jobs, and close to 15 per cent access 11 or more systems<sup>34</sup>, raising the chances of risky or non-compliant behaviour.



When grievances arise or litigation proceedings are initiated, line managers often come under scrutiny. Those who manage geographically dispersed or large sales teams with commission-based pay are especially vulnerable and may require extra support.

While HR and legal teams can and should provide this support, technology will also play a key role. At present, much information relating to employees and related compliance issues is kept in physical files and data is difficult to access, search through and update. One challenge will be to move it on-line so that managers have current and relevant information at their fingertips.

### What our futurist says:

The game changer in compliance could emerge from the technology that powers virtual currency Bitcoin, the blockchain, which is estimated to hit the tipping point between 2023 and 2027. The key fact is that once the blockchain has information recorded in it, refuting its presence is not mathematically possible. It could be used to conclusively prove that a particular document existed at a certain point in time, or that a given business successfully scanned and disseminated the contents of the document via its cognitive systems.

The blockchain could then conclusively demonstrate compliance without the need for a middleman. This concept could be extended to include proof of audit/control, where each new version of a document can be shown to have changed according to a defined set of rules. This has the potential to dramatically reduce the cost of regulatory compliance in the future<sup>36</sup>.

"Advances in neuroscience and wearables measuring happiness, engagement and mood could soon combine to indicate when an employee is more likely to act against the interest of the organisation"





### **About the authors**

### **BrightHR**

BrightHR is a people management software company blazing a trail for brilliant workplace cultures. Its solution enables you to effortlessly implement HR admin processes – from approving holidays, logging sickness and tracking lateness, to running reports and document management – whilst also providing you with access to specialist expert knowledge on topics ranging from employment law to happiness.

### **Lynda Gratton**

Lynda Gratton is a Professor of Management Practice at London Business School, where she directs 'Human Resource Strategy in Transforming Companies', considered to be the world's leading programme on human resources. For over five years she has led the FoW (Future of Work Research Consortium), which has brought together executives from more than 60 companies, both virtually and on a bespoke collaborative platform. Over the last 20 years, Lynda has written extensively about the interface between people and organisations, including eight books that have sold worldwide. Lynda's work has been acknowledged globally, and she is named by Thinkers 50 as one of the top 15 thinkers in the world.

### **The Hot Spots Movement**

The Hot Spots Movement is a specialist research and consulting team founded by Professor Lynda Gratton, which identifies where companies can future-proof their working practice in order to foster innovation and enhance performance. The research conducted at The Hot Spots Movement is coordinated through the FoW, which has brought together a global community of 90 of the world's most influential companies. By combining energetic live events with cutting-edge collaborative technology, it has connected more than 500 executives, all of whom are leading their organisations in preparing for the future.

### David A. Smith

David A. Smith is a futurologist and Chief Executive of GFF (Global Futures and Foresight), a strategic futures research organisation that aims to develop views of the future to help clients to embrace change with more certainty, thereby releasing the full power of their creativity and innovation.

His 30-year diverse business career has made David recognisable as one of the world's leading futurists and strategic thinkers. Since founding GFF, he has worked with many of the world's largest organisations, government bodies, academic institutions and industry associations, leading many to embrace and prepare innovative strategies to renew themselves and generate new growth.



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