

# Preparing Business Leaders for Digital Disruption



EXECUTIVE DEVELOPMENT

**By:**

**Kip Kelly**

**Director**

**UNC Executive Development**

**Kimberly Schaufenbuel**

**Program Director**

**UNC Executive Development**

All Content © UNC Executive Development 2016

Website: [www.execdev.unc.edu](http://www.execdev.unc.edu) | Phone: 1.800.862.3932 | Email: [unc\\_exec@unc.edu](mailto:unc_exec@unc.edu)

## Introduction

**S**ocial media. Cloud computing. Data science. Smartphones. The Internet of Things. New digital technologies are driving massive transformation in the global economy, and the convergence of these technologies is enabling innovative business models which are disrupting the status quo for many organizations. Digital disruption is forcing many companies, and even entire industries, to rethink their business models.

Digital disruption is the principle reason why just over half of the companies on the Fortune 500 list have disappeared since 2000 (Nanterme, 2016). According to the Global Center for Digital Business Transformation, digital disruption has the power to reshape markets faster than any other force in history. A survey conducted by the Center found that many industries lack the ability to adapt—and this means that four out of 10 existing businesses across industries will be displaced within the next five years (Bradley et al, 2015).

Digital disruption has the potential to impact every industry, every company, and every business leader – and while there’s agreement that transformation is underway, many companies remain unprepared. In a recent study by PricewaterhouseCoopers, 77 percent of business leaders responding to a survey agreed that technology will transform stakeholder expectations in the next five years. In a related study by Deloitte, only 14 percent of leaders said their companies were ready to redesign their organizations in response to digital disruption (PwC staff, 2016; Hurd, 2016).

As organizations adjust and redesign in response to digital disruption, they will need to think differently about talent management. Rapidly changing business models will require new skill sets for leaders. Leaders will need agility to handle the changing markets and industries that digital disruption makes inevitable. They will need resilience - the ability to handle volatility and complexity. They must become more comfortable with ambiguity and uncertainty. They must learn to adapt and move fluidly in a rapidly changing business environment. These leadership traits are hard to find, so talent management professionals will need to work even harder to attract, develop, and retain business leaders with the right skill set to be successful. (See UNC Executive Development white paper [Developing Leaders in a VUCA Environment](#) for more information on this topic.) At the same time, human resources is not immune to the forces of digital disruption, so talent management professionals will also need to anticipate and accept that their role will likely change in the very near future. As business models change, it will become more critical that human resources is aligned with business strategy, and that talent management becomes more nimble to adapt quickly when the strategy changes. This white paper discusses:

- How technology has impacted, influenced, and increased global business;
- What digital disruption is and how specific organizations are using it to their advantage;
- How digital disruption affects the search for talent; and,
- Steps human resource and talent development professionals can take to prepare their organizations to optimize for digital disruption.

# The Technological Transformation of Global Business

**T**echnology touches—and changes—just about everything, from the way individuals interact with the world to the way business gets done. Today, 900 million people have international connections on social media and are using digital platforms to learn, add new skills, collaborate, find jobs, show off their talent, and build personal networks. Forty-four million people have looked for freelance jobs on sites like Freelancer.com and Upwork, and 400 million people have posted their resumes on LinkedIn (McKinsey Global Institute staff, 2016). These people come from across the globe, creating a new digitally linked global labor market.

## Digital Disruption Lingo for HR

The digitization of things has not only changed business models; it has spawned hosts of new terminology that HR and talent management professionals will need to understand if they are to hire and train for the digital revolution. Here are a few:

- Cognitive computing: Software that can sense, comprehend, and act (Accenture staff, 2015).
- Digital ecosystems: The grand network of connections and its transformative power (Accenture staff, 2015).
- “Fourth Industrial Revolution”: The World Economic Forum’s term for the digital transformation of industries (Nanterme, 2016).
- Internet of Things: The system of inter-related computing devices, mechanical and digital machines, objects, animals, or people who are given unique identifiers and the ability to transfer data over a network without needing human-to-human or human-to-computer interaction (Nanterme, 2016).
- Industrial Internet of Things: The use of the Internet of Things technologies in manufacturing. It combines machine learning and big data technology (Nanterme, 2016).
- SMAC: Social, mobile, analytics, and cloud technologies (Nanterme, 2016).

A study conducted by the McKinsey Global Institute found that while the global flow of physical goods and services have slowed in recent years, cross-border bandwidth has grown 45 times larger since 2005 and is projected to grow nine times more in the next five years. This international bandwidth allows individuals and businesses to obtain information, conduct searches, provide instant communication and financial transactions, send videos, and more, all on a global scale. It also allows

for the exchange of virtual goods like e-books, apps, online games, MP3 files, and streaming services like Netflix and Amazon, turning business models on their heads (McKinsey Global Institute staff, 2016).

Technology lowers the cost of international interactions and transactions, opens markets, and brings in new players who will threaten big businesses. Smaller and medium-sized businesses—who are generally more agile than larger businesses—are taking advantage of no-cost digital platforms like eBay, Amazon, Facebook, and Alibaba to reach customers and suppliers internationally. The McKinsey Global Institute study reported that Amazon currently hosts two million third-party sellers. Facebook also estimates that 50 million small- and medium-sized companies have a presence on its site, up from 25 million in 2013. Small and medium-sized companies are using technology to make their presence known—and this will take a bite out of larger companies' profits.

These same platforms are also giving birth to new global startups; the McKinsey Global Institute study found that 80 percent of tech-based startups are “born” global. These new startups, notes McKinsey, have an edge over even small- and medium-sized companies, but are a particular threat to larger organizations because they tend to be faster at innovation, more agile, and have a culture that rewards experimentation and risk-taking. These start-up companies are waging a guerilla war on larger, more established companies, and they're using digital disruption to redefine the battle lines.

## What Is Digital Disruption?

**D**igital disruption refers to the rapid, transformational changes made possible by digital technologies and the impact they have on existing business practices, challenging and, in some cases threatening, the established ways of doing business. Some might argue that this is nothing new; new technologies have always emerged to replace old technologies. The difference between traditional competition and digital disruption, according to the Global Center for Digital Business Transformation, comes down to two factors: the velocity of change and the high stakes involved. Technological change is exponential, and the rate of change is always accelerating. Innovation is happening on multiple fronts simultaneously, and many of these new digital technologies are converging to enable new and unexpected opportunities. At the same time, the costs associated with these new technologies is dropping quickly, and with it, the barrier to entry for new competition is disappearing. These dynamics make it very difficult for established incumbents to anticipate emerging competitive threats and protect the value proposition of their existing goods and services.

There are a variety of technologies driving digital disruption. These include big data and advanced analytics—technology that extracts value from very large volumes data. Smartphones, social media, cloud computing, sensors, virtual reality, and cognitive computing (simulating human thought processes into a computer model) are all examples of digital technologies that are disrupting business models (Deloitte staff, 2016). Many of these digital technologies have converged, like social, mobile, and cloud (SoMoClo) to enable new collaborative communication technologies with which consumers can connect and access data anytime and anywhere. These SoMoClo technologies have already

become common in our personal lives, and many companies are working to harness the potential of these technologies to enable greater flexibility, innovation, collaboration, and productivity.

Digital disruption includes the multitude of applications that are disrupting traditional industries.

Airbnb, for example, a service that allows people to list and book housing for short-term rentals all over the world, owns no real estate, yet has rocked the hotel industry; hotel revenues are declining in Airbnb locations (Hurd, 2016). And Uber, the app that helps people find rides in nearly 500 locations across the globe, has disrupted the taxi industry. These digital native companies are using technology to redefine the customer experience, and many established companies have found it difficult.

### Industries most at risk because of digital disruption (in order of risk):

1. Telecommunications
2. Retail, Education
3. Hospitality/Travel, Financial

### Industries less at risk:

1. Pharmaceuticals
2. Utilities
3. Oil and Gas

Source: Bradley et al, 2015

New companies like Airbnb and Uber have captured market share and headlines, but much of the innovation and disruption is happening behind the scenes within companies trying to anticipate and seize the next opportunity. As Rob Preston of Oracle wrote in an article for Forbes, “FedEx

is in a digital arms race with UPS; Toyota with Ford; Goldman Sachs with Bank of America; P&G with Unilever; ExxonMobil with Royal Dutch Shell. Those companies and their myriad other competitors are hiring or acquiring the requisite application development, user experience, software architecture, data analytics, system integration, business analysis, and project management expertise.” These companies must become more nimble to compete with new and existing competition. Digital disruption has rapidly reduced speed-to-market, making agility a key organizational competency. Agility, however, is not something larger, more traditional companies are very good at, making it difficult to capitalize on disruptive innovations. Clayton Christensen of Harvard Business School notes that the business process and models that make large companies good at their existing business makes them bad at competing within disruption (Bradley et al, 2015). Many organizations lack foresight and fail to recognize disruptive threats until it’s too late. Those that do sense an impending threat often fail to act quickly or boldly enough. If organizations are going to survive digital disruption, they are going to have to re-evaluate their current organizational structures, products, services, and talent – and evolve.

Despite the threat of digital disruption, CEOs remain optimistic and perceive digital technology positively. A recent PricewaterhouseCoopers survey found that 68 percent of CEOs believed big data and analytics—a key component of digital disruption—would help them better understand their customers’ needs and would help them more effectively engage customers (PwC staff, 2016). There’s a recognition that digital technology will help organizations enter new sectors by collaborating with peers and competitors. And it will also lead to the creation of new jobs (Nanterme, 2016). However,

while they are starting to recognize the potential impact of digital disruption, they are not ready for the road ahead. According to Cisco's Global Center for Digital Business Transformation's report, business leaders are not prepared to make the necessary changes to adapt their organizations to digital disruption. Their study found that only 45 percent of business leaders thought that digital disruption was worthy of board-level attention, and that 43 percent of business leaders had not even acknowledged the risk digital disruption poses for their organizations or have not addressed it sufficiently (Bradley et al, 2015). Accenture found that only 38 percent of business leaders said they were ready to change HR and talent practices and only 37 percent said they had new work practices and processes in place that were driven by digital technologies. Business leaders also said that leadership and vision were the main challenges to becoming digital (Brecher et al, 2016).

### General Electric Goes Digital



GE has traditionally made most of its money by selling industrial hardware and repair services but realized that it was at risk of losing many of its best customers to nontraditional competitors like IBM and SAP and to big-data startups who were trying to shift the customer value proposition away from goods and services and towards realizing new efficiencies through analytics and algorithms. So in 2011, the company embraced digitalization by adding digital sensors to all of its machines, connecting them to a common, cloud-based platform, and investing in modern software development capabilities, essentially transforming their business model.

Source: Iansiti and Lakhani, 2014

## Digital Disruption and the War for Talent

If companies are engaged in a digital arms race, the battle for top talent just became a top priority - and this calls for a different approach to leadership development. Edgar Berger, Chairman and CEO of Sony Music—an industry that has been rocked by digital disruption—says that a focus on leadership and talent development is critical to survive. Leaders in today's business environments must have the ability to take risks, be comfortable with ambiguity, and have the ability to handle fast-moving business models. Flexibility is also key, says Berger (Spencer Stuart staff, 2015).

Research conducted by Econsultancy concluded that effective leaders in today's digital world must be:

- Technology literate.
- Able to draw from a wider set of leadership styles.
- Willing to collaborate and/or be a co-creator.

- Able to draw value from large amounts of data and combine it with creative thinking and inspiring vision.
- Customer centric, visionary, adaptive, agile, open, curious, and innovative (Perkin, 2015).

Business professionals recognize that digital technology is reshaping the way they work, and they understand that they will need to acquire new skills to remain effective. A research study conducted by Accenture found that employees were fully aware that digitalization would improve their jobs and job prospects and were actively seeking out the skills they would need to suit the demands of a digital business (Brecher et al, 2016). Every business leader will need to become more data literate and technologically proficient. Teams will need to become more creative, and organizations will need people with the skills to analyze large amounts of data (Spencer Stuart staff, 2015). Problem-solving, interpersonal communication, and negotiation skills will also be in high demand (Brecher et al, 2016).

According to a recent survey from Deloitte, 89 percent of respondents said that improving or re-engineering their organizational leadership was a top priority in responding to digital disruption (Deloitte staff, 2016), but developing these critical skills remains elusive. While 82 percent of business leaders said they expected their organizations to be digital businesses within the next three years (Brecher et al, 2016), only 30 percent of business leaders said they were focusing on developing the necessary skills and adaptability of their people (PwC staff, 2016). A recent Russell Reynolds survey confirms the gap. That survey found that while most of the C-level executives surveyed said they had a digital strategy in place, only half said they had the right people to execute that strategy, and only 20 percent said their HR function was helping them make the transformation (Grossman, 2016). As a result, many companies are reporting talent shortages in critical roles such as software engineering and big data analysis (Manyika et al, 2015). Companies must anticipate the growing demand for these critical skills and consider the need for a variety of new jobs that are being created because of digital disruption, each with their own specialized skill sets—jobs like digital copywriters, scrum masters in IT, and digital production managers (Brecher et al, 2016). In the war for talent where these skills are in high demand, organizations must work harder to recruit top talent while also building these capabilities within their existing workforce. (See UNC Executive Development white paper [The Big Data Talent Gap](#) for more information on this topic.)

## Disrupting Talent Development

If companies are going to survive digital disruption, they can choose to disrupt themselves or potentially be replaced by another business model (Bradley et al, 2015). The same is true for human resources. Talent management professionals can choose to disrupt the existing model or risk being replaced.

Below are several ways human resources professional can prepare for digital disruption and the changes every organization will face:

1. **Make sure HR strategies are aligned with business strategies.** While alignment has always been important, it will become even more critical as digital disruption quickly transforms the business landscape. Fortunately, most industries are still in the early stages of digital disruption – but changes are coming quickly which will impact companies in every industry and geography. The first industries disrupted by digital technology offer a valuable, and cautionary, tale for every organization traveling the same, inevitable path. They illustrate how quickly business models change, replaced by new business models as a result of digital disruption. HR leaders in every industry must understand the potential for disruption, and they must work to align HR strategy with the current business strategy while also anticipating a change in business strategy. This will require more agility and flexibility than many organizations currently offer.
2. **Experiment with new technology and tools within the HR function and support these efforts throughout the organization.** According to Bersin by Deloitte, over 40% of all companies are replacing or plan to replace their core HRMS systems, and many are shifting to cloud based solutions. While the cost of implementing new HR technology is high, many organizations are realizing efficiencies and cost savings, spending significantly less per employee on HR. New, video-based learning solutions are disrupting the Learning Management System market. Practical, powerful mobile applications are quickly replacing typical browser-based web systems and they're changing how companies approach everything from employee well-being to performance reviews. HR technological trends come in cycles, and the pace of these changes is accelerating. HR needs to become more agile with the implementation of new technology solutions and more mindful of new trends that are reshaping the profession. HR and talent management professionals can serve as champions for new technology and ensure that big data analytics, social collaboration tools, and 3D/virtual reality interfaces are deployed throughout an organization (and within their own department) (Brecher et al, 2016). Technology changes quickly, and new tools are always emerging, so ongoing experimentation should be encouraged and supported. (See UNC Executive Development white paper [Driving Talent Development with Data](#) for more information on this topic.)

### Caesars Resort Digital Recruiting



When Caesars Resort was about to open a new location in Cincinnati, it was faced with a daunting challenge; hiring for 700 new positions in just five weeks. To meet that goal, HR used digital interviewing technology from HireVue that allowed the more than 5,500 applicants to self-schedule their own video interviews that were later vetted by the resort's hiring teams. The technology allowed the hiring team to effectively manage the large pool of candidates in a short period of time. From that pool, 1,800 candidates were invited for in-person interviews.

Source: Boese, 2014

3. **Hire for the digital age, with a deep understanding of the critical technical skill and leadership competencies.** CHROs and CIOs in every industry must work together to understand how cloud, data analytics, social, and mobile will converge to impact business strategy and then work to define the critical technical skills needed to enable the business strategy. Every company is different, requiring different technical skills, but many IT skills are universal – and many of these roles are in high demand. Sharon Florentine of CIO.com identified some of the most sought after IT skills for 2016. At the top of the list are user experience and user interface (UX/UI) designers, followed by software developers, and specifically full-stack web developers proficient in languages like Java, JavaScript, PHP, and Python. Network engineers, data scientists, cloud architects, cybersecurity specialists, and mobile engineers were also identified as among the most in demand IT skills. Finally, business analysts and project managers who “speak both the language of business and the language of IT” are needed. As these IT skills grow in importance, it will become harder to attract and retain critical talent. HR leaders must anticipate swift changes in demand, conducting periodic skills/gap analyses to determine the current and future gaps in the workforce, and develop strategies to close the gaps. Many organizations don’t realize talent gaps exist until they lose valuable knowledge and experience and then find it difficult to recruit new talent to replace essential skills. As competition for top talent increases, companies will need to disrupt the traditional recruitment model and find more creative ways to attract talent. Many companies are looking outside their industry to recruit, targeting smaller startups and agencies to fill critical roles. These new employees who embrace digitalization can help to change an organizational culture and speed up the transformation from the traditional business model to one that embraces and enables digital disruption. Some companies are creating entirely new roles to provide that catalyst, such as a Chief Digital Officer (Grossman, 2016).
4. **Develop talent for the digital age.** If companies cannot find talent with the necessary digital skills, they should consider hiring for behavior and attitude—not qualifications—and then provide the training needed to acquire the skills (Donnelly, 2016). This will require a new strategy for talent development – one that provides more relevant, continuous, on-demand learning opportunities. Many companies are turning to technology to help solve this challenge, expanding cloud-based learning to include MOOCs (massive open online courses), SPOCs (small private online courses), instructional videos, learning games, e-coaching, virtual coaches, mobile apps, and more (Benson-Armer et al, 2016). These technologies offer an effective new tool to rapidly build critical skills – and this includes both “hard” and “soft” skills. Technical skills are obviously important in the digital age, but HR leaders must also ensure that business leaders at every level have the necessary leadership skills for the new digital reality with a focus on specific characteristics including adaptability, collaboration, problem solving, and learning agility. Executive search firm Russell Reynolds Associates profiled executives who were charged with digitally transforming long-established organizations and found they shared the following characteristics: they were significantly more innovative and disruptive and

were 56 percent more inclined to cut through bureaucracy; they were high in social adeptness, highly determined, and bold; and, they were able to adapt to different audiences (Grossman, 2016). Helping business leaders to develop these skills will not be easy. The traditional approach to talent development may prove to be insufficient. To accelerate talent development, companies need to disrupt the old model and find new ways to build the critical competencies, data literacy, and technical skills business leaders need to thrive in a digital economy.

## Conclusion

**I**n a recent poll of Fortune 500 CEOs, the rapid pace of technological change was identified as the single biggest challenge facing companies, and nearly all of the CEOs surveyed (97%) said their companies will change more in the next five years than in the past five years. Technology has always been a transformative force for business, and the pace of technological change is accelerating. This presents a significant challenge for companies trying to remain competitive, and an even bigger challenge for HR professionals tasked with attracting, developing, and retaining the talent that every company needs to compete. Successful companies must develop the right leadership capabilities, workforce skills, and corporate cultures to support digital transformation.

## About UNC Executive Development

Our approach to program design and delivery draws upon the power of real-world, applicable experiences from our faculty and staff, integrated with the knowledge our client partners share about the challenges they face.

We combine traditional with experiential and unique learning to ensure that all individuals gain relevant new skills that they can easily implement within their own organizations. Through action learning and business simulation activities, we challenge participants to think, reflect and make decisions differently.

### Our Approach: The Partnership

Our team customizes each leadership program through a highly collaborative process that involves our clients, program directors, faculty and program managers. We are dedicated to following-up with our clients and individual participants to ensure that their learning experiences have been meaningful and impactful. This integrated approach consistently drives strong outcomes.

### Our Approach: The Results

Our executive education programs are designed with results in mind, and we are focused on successfully meeting our clients' business and academic expectations. Below are a few examples of the results our client partners have achieved:

- Leadership refocused with new strategy and cohesive vision
- Strategic plans created for the global marketplace
- Supply chains streamlined
- Products redefined
- New markets targeted
- Cost-saving measures developed
- Silos leveled
- Teams aligned

Participants leave empowered to bring in new ideas, present different ways to grow business and tackle challenges. The result is stronger individuals leading stronger teams and organizations.

### Contact Us

**Website:** [www.execdev.unc.edu](http://www.execdev.unc.edu) | **Phone:** 1.800.862.3932 | **Email:** [unc\\_exec@unc.edu](mailto:unc_exec@unc.edu)

## Sources

Accenture staff (2015). *Technology Vision 2015*. Accenture. Retrieved from <http://techtrends.accenture.com/us-en/business-technology-trends-report.html>.

Benson-Armer, R., Gast, A., and van Dam, N. (May 2016). Learning at the speed of business. *McKinsey Quarterly*. Retrieved from <http://www.mckinsey.com/Business-Functions/Organization/Our-Insights/Learning-at-the-speed-of-business?cid=orgfuture-eml-alt-mkq-mck-oth-1605>.

Boese, S. (21 July 2014). Digital disruption. *Human Resource Executive Online*. Retrieved from <http://www.hreonline.com/HRE/view/story.jhtml?id=534357310>.

Bradley, J., Loucks, J., Macaulay, J., Noronha, A., and Wade, M. (June 2015). Digital vortex: How digital disruption is redefining industries. *Global Center for Digital Business Transformation*. Retrieved from [http://global-center-digital-business-transformation.imd.org/globalassets/digital\\_vortex\\_full-reportv2.pdf](http://global-center-digital-business-transformation.imd.org/globalassets/digital_vortex_full-reportv2.pdf).

Brecher, D., Laurenceau, D., and Sloman, C. (2016). Digital disruption: Embrace the future of work and your people will embrace it with you. *Accenture Strategy*. Retrieved from [https://www.accenture.com/t20160113T204412\\_\\_w\\_\\_/us-en/\\_acnmedia/PDF-4/Accenture-Strategy-Digital-Workforce-Future-of-Work.pdf](https://www.accenture.com/t20160113T204412__w__/us-en/_acnmedia/PDF-4/Accenture-Strategy-Digital-Workforce-Future-of-Work.pdf).

Deloitte staff (2016). Global human capital trends 2016: The new organization: Different by design. *Deloitte*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/human-capital/gx-dup-global-human-capital-trends-2016.pdf>.

Donnelly, S. (22 March 2016). HR departments are feeling the pain of digital disruption. *Econsultancy*. Retrieved from <https://econsultancy.com/blog/67665-hr-departments-are-feeling-the-pain-of-digital-disruption/>.

Gartner staff (02 October 2015). Top strategic predictions for 2016 and beyond: The future is a digital thing. *Gartner*. Retrieved from <https://www.gartner.com/doc/3142020/top-strategic-predictions-future-digital>.

Grossman, R. (21 March 2016). The industries that are being disrupted the most by digital. *Harvard Business Review*. Retrieved from <https://hbr.org/2016/03/the-industries-that-are-being-disrupted-the-most-by-digital>.

Hurd, M. (21 March 2016). Digital disruption can make business leaders—or break them. *LinkedIn*. Retrieved from <https://www.linkedin.com/pulse/digital-disruption-can-make-business-leaders-break-them-mark-v-hurd>.

Iansiti, M., and Lakhani, K. (November 2014). Digital ubiquity: How connections, sensors and data are revolutionizing business. *Harvard Business Review*. Retrieved from <https://hbr.org/2014/11/digital-ubiquity-how-connections-sensors-and-data-are-revolutionizing-business>.

Lloyd, T. (16 June 2015). The future of HR: Insights from Digital Disruption '15. *HireVue*. Retrieved from <https://blog.hirevue.com/the-future-of-hr-insights-from-digital-disruption-15/>.

Manyika, J., Lund, S., Robinson, R., Valentino, J., and Dobbs, R. (June 2015). Connecting talent with opportunity in the digital age. *McKinsey Global Institute*. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/connecting-talent-with-opportunity-in-the-digital-age>.

McKinsey Global Institute staff (March 2016). Digital globalization: The new era of global flows. Executive summary. *McKinsey Global Institute*. Retrieved from [www.mckinsey.com/mgi](http://www.mckinsey.com/mgi).

Morgan, H. (22 March 2016). Digital disruption 2016: Transformation must combine digital capability with leadership capability, says Capgemini. *ARN*. Retrieved from <http://www.arnnet.com.au/article/596475/digital-disruption-2016-transformation-must-combine-digital-capability-leadership-capability-says-capgemini/>.

Nanterme, P. (17 January 2016). Digital disruption has only just begun. *World Economic Forum*. Retrieved from <https://www.weforum.org/agenda/2016/01/digital-disruption-has-only-just-begun>.

Perkin, N. (November 2015). Effective leadership in the digital age. *Econsultancy*. Retrieved from <https://econsultancy.com/reports/effective-leadership-in-the-digital-age/>.

Preston, R. (20 April 2015). Digital disruption: It's not what you think. *Forbes*. Retrieved from <http://www.forbes.com/sites/oracle/2015/04/20/digital-disruption-its-not-what-you-think/#67b494f331dc>.

PwC staff (2016). Redefining business success in a changing world. *PwC*. Retrieved from <https://www.pwc.com/gx/en/ceo-survey/2016/landing-page/pwc-19th-annual-global-ceo-survey.pdf>.

Spencer Stuart staff (May 2015). Digital disruption: Leadership lessons from the music industry. *Spencer Stuart*. Retrieved from <https://www.spencerstuart.com/research-and-insight/digital-disruption-leadership-lessons-from-the-music-industry>.

Sutcliffe, J. (08 May 2015). Q&A with Ray Yang: What digital transformation means for HR. *Visier*. Retrieved from <http://www.visier.com/tech-insights/ray-wang-what-digital-transformation-means-for-hr/>.