

CLIFFHANGER

HR on the Precipice in the Future of Work



Insights and Predictions from PageUp Talent Lab

Sylvia Vorhauser-Smith & Karen Cariss

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HR on the Precipice in the Future of Work



First published 2017

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Published by

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ISBN 978-0-646-96817-9



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About PageUp Talent Lab

PageUp has a long history of commitment to thought leadership in talent management, publishing materials and contributing to thought practices in HR across the globe. PageUp integrates thought leadership and market feedback to inform technology development that aligns to the future of work.

The PageUp Talent Lab was formed in mid 2015. Created as a platform to encourage discourse and debate among HR and business executives on the big workplace challenges of the present and future, Talent Lab *“puts HR under the microscope”* with a view to elevating HR’s contribution and voice in critical business issues.

Talent Lab brings together HR executives, industry thought leaders, business analysts and subject matter experts to get to the heart of the many workforce challenges facing business. An initiative of PageUp Global Research, Talent Lab was conceived as an opportunity to contribute innovative thinking and help HR and business leaders understand what it takes to unleash talent and get the business results necessary to succeed.

A new Talent Lab topic is debated by Talent Lab contributors periodically and the outcomes published on www.pageuptalentlab.com for sharing and broader discussion.

About PageUp

We are passionate about building technology that people love to use. Today’s HR technologies underpin our clients’ ability to build strong employment relationships and equip them with tools to attract, develop and retain the talent needed to take their business forward. We partner with organizations to learn their business challenges and provide cutting-edge solutions and innovative technology to support their talent management initiatives.

Our state-of-the-art technology solutions unifies Recruitment, Performance Management, Development, Succession Management and Workforce Analytics to help organizations overcome the talent management challenges inherent to operating large businesses and across multiple geographies.

The PageUp teams in Australia, U.S., U.K., Singapore, Hong Kong and the Philippines help our clients around the world to deliver great business results through human capital technology.

Visit us at www.pageuppeople.com.

Acknowledgements

It is with sincerest gratitude that we thank all those that have been involved in the creation of this book. We have been inspired by great minds, through enlightening dialogues, in countless interactions.

Our thanks to the human resources executives that joined the Talent Lab for its first three topic rounds and contributed their stories, experiences, practices and ideas: Hamish Aikman, Robyn Batson, Paul Birch, Nathan Callaghan, Rose Clements, Vivienne Curtis, Michelle Dervan, Kerry Dillon, Melissa Donald, Nicholle Duce, James Elliott, Brita Goodwin, Michelle Greenhalgh, Stephen Hanlon, Cait Hayes, Alanna Herbst, Nicole Kalaitzis, Jane Lewis, Toby List, Ashleigh Loughnan, Maree Merrett, Jim Nolan, Carolyn Noumertzis, Vaughan Paul, Tabitha Pearson, Stewart Silk, Chris Steinfort, Maxim Tambling, Trish Unwin and Michael Vogt.

Thanking also the industry analysts and thought leaders who contributed their knowledge, insights and forecasts to the Talent Lab, broadened our thinking and challenged our assumptions and comfort zones: Naomi Bloom, Marc Effron, Peter Forbes, Peter Fuda, Stacey Harris, Kyle Lagunas, Mollie Lombardi, Zrinka Lovrencic, Sara Moulton, Patrick Sharry, Brian Sommer, John Sumser, Nick Sutcliffe, Kevin Wheeler and Su-Yen Wong.

Finally, a huge thank you to the PageUp team for all the work behind the scenes.

Great job, everyone!

Preface

A book is host to a collection of words – there are approximately 70,000 in the one you are reading right now. Since humans created language, we have accrued and accumulated an unquantifiable number of words.

New words are invented in every language, every day. They give a name, a label, a reference to the objects and features of our world and to social sentiment. Our languages evolve with each passing year.

2016 was quite a ride. Around the globe, social and political turbulence was rife: terror attacks in Brussels, Nice, Istanbul, Orlando and Baghdad; coup attempts in Turkey and Thailand; the refugee crisis in Syria; the backlash against globalization that underscored shock results in Britain's Brexit vote and the U.S. Federal election, and so many more.

The words that gave voice to the sentiments and reactions of people everywhere are reflected in the Word of the Year, published annually by the custodians of our languages: dictionaries. By the end of 2016, trends and spikes in the word look-ups of three leading dictionaries gave us the words that most strongly resonated in the global dialogue during this year: *post-truth*, *surreal* and *xenophobia*.

Post-truth: *Relating or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.*

*Oxford Dictionary
2016 Word of the Year*

Surreal: *Marked by the intense irrational reality of a dream.*

*Merriam-Webster Dictionary
2016 Word of the Year*

Xenophobia: *An unreasonable fear or hatred of foreigners, people from different cultures, or strangers.*

*Dictionary.com
2016 Word of the Year*

They are a sobering reflection, and perhaps an indictment, of our times. The astonishing progress we are making in science, medicine and technology, that is changing lives and the world for the better, appear paralleled only by the concurrent anxiety, disillusionment and paranoia that accompanies the metamorphic transformation we find ourselves in.

This transformation grips us in every facet of our lives – in our homes, in our communities, in our workplaces. We are witnessing an exponential unveiling of technology that is now reaching a tipping point. The upheaval is palpable.

As we put the (metaphorical) pen to paper for this book, all the above events transpired. Like a rolling thunder, we watched, almost daily, the continuous cascade of world events, marked equally as catastrophes and celebrations, depending on your lens.

Disruption is putting it mildly.

This backdrop served as our contextual frame during writing. Never has there been greater, swifter, deeper change than that which we are experiencing now. Notwithstanding, it serves only as a taster of what is to come.

Businesses everywhere are reeling in the tumult. How to compete? How to collaborate? How to reinvent?

HR's own journey of reinvention has extended over the last few decades. A journey so long that the edge has been taken off its urgency, its focus and direction been diluted, and even its measure of success ill-defined. Many with whom we have engaged over this course have mourned HR's deficiencies; others have reasserted their belief in its criticality; others still seem blindly content despite lacklustre progress.

So many voices, so many contradictions.

To us, it became clear that the road HR is travelling has a hard stop at a cliff face. On the precipice, there are two choices: invent a way across the chasm, or to disappear into it. We are at that point.

All three Words of the Year contain an element of the irrational. The irrational comes from the brain region to which humans revert when confronted with the chronic stress of unrelenting change and uncertainty, fear and anxiety. It is not the place from which sound reason and constructive discourse arises. Yet these are the hallmarks of our time and we must confront and overcome them to protect our future.

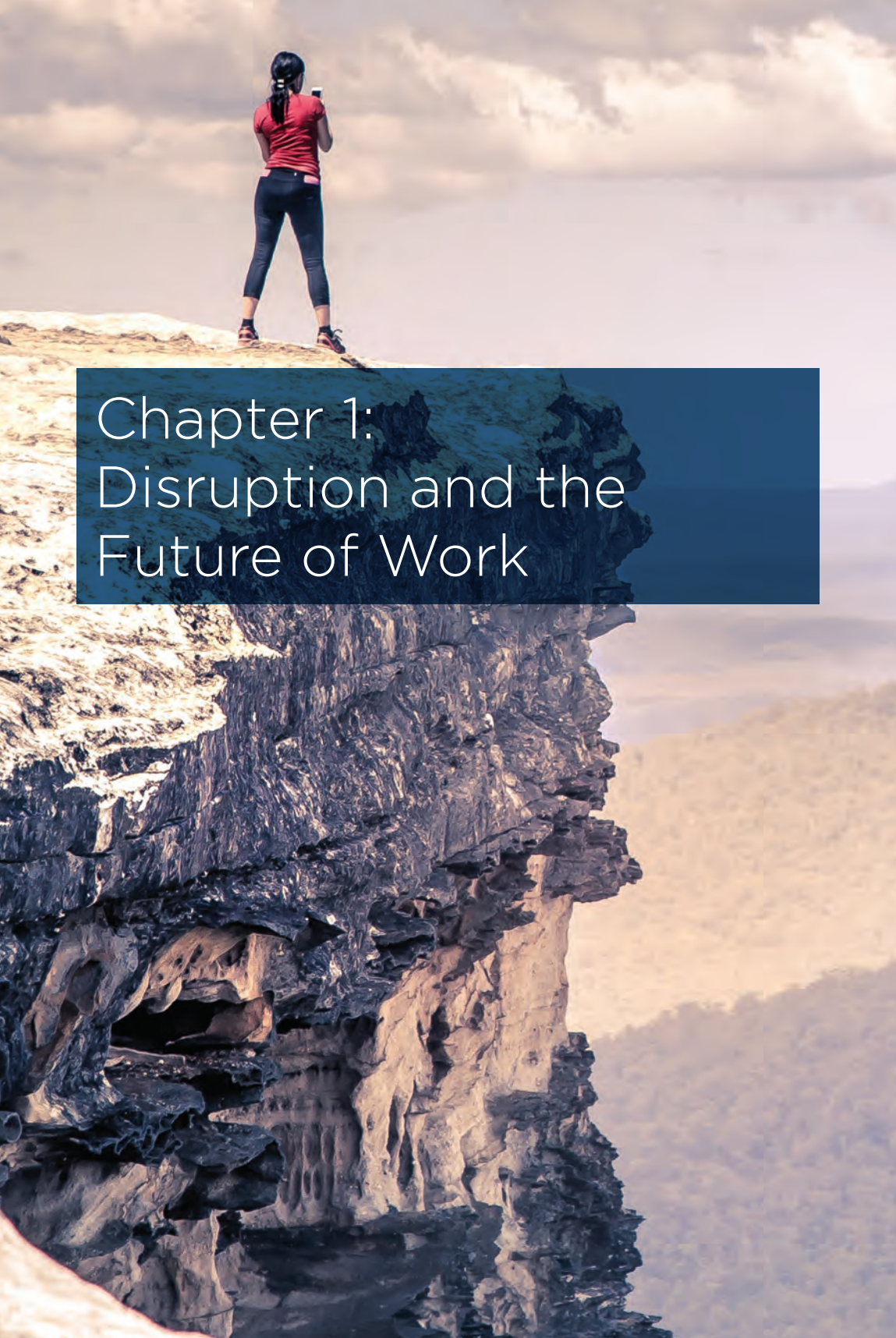
Language makes us human. Xenophobia is dangerous; objectivity and facts should never cower to post-truths; and we must emerge from the haze of the surreal. We must watch our language.

Mankind's ingenuity has always heralded progress. It lands us in today's advanced world, brimming with opportunity. Human capital (mankind's workplace manifestation) is the centrepiece of this continued advancement.

It is our intense hope that HR can galvanize the workforce of the future to unleash the boundless talent capable of crossing the many chasms before us.

To the success of HR!

Sylvia & Karen



Chapter 1: Disruption and the Future of Work

In Brief

- Technological progress is a feature of human history - but it's different this time. The pace of change, global connectivity, interdependencies and concurrent revolutions in science, medicine and technology are transforming the global social, political and economic landscape.
- Unicorns build their market values by disrupting traditional businesses and industries, and achieve billion-dollar company valuations with a fraction of the labor force they have displaced.
- Moderately skilled jobs, requiring some education and training, represent the largest demographic in the workforce and the one at highest risk of extinction.
- Longer life expectancy may be a luxury few can afford: people will work longer and experience continuous cycles of work, learning and leisure time.
- Work is something you do, not somewhere you go. Workplaces are being redefined and reimagined, underscored by a new understanding of productivity and engagement.
- A multi-modal future workforce of employees and contingent workers will challenge how and where organizations source talent and how leaders manage it.
- Three intelligences will surface as critical success factors for HR and leadership success: digital intelligence, cultural intelligence and business intelligence.
- HR can play a strategic role in the organization by sharp alignment with the business strategy, using technology as a strategic enabler and applying strategic foresight.
- HR must be instrumental in facilitating the transformation of the workforce to align it to the needs of digital business, while crafting its own reinvention.

"Hi everyone, I'm Matt, I'm 18 years old and I'm the CEO at Beam. I founded my first company along with my co-founder James when we were 14 years old. It's called MCPProHosting and it's one of the world's largest game server providers."

That was the opening of Matt Salsamendi's acceptance speech on winning the TechCrunch Disrupt 2016 New York Startup Battlefield Disrupt Cup, an award for the best early stage startup companies. Delivered with the poise of someone twice his age and the raw passion of someone half of it, Salsamendi has achieved more in four short years than many will in a lifetime. And that's before he's even gone to college.

Refreshing and inspiring.
Sobering and unnerving.
Disruption today.

Not without precedent. Flashback a few centuries: the steam engine transported our agrarian ancestors from the farmlands to the factories. Then came the combustion engine, electricity and fuel for the industrial revolution. In every decade of the 19th and 20th centuries, breathtaking innovations continued. From transformational inventions including the telephone, motor vehicle, aircraft, nuclear reactor and the personal computer, to lifestyle enhancers such as the air conditioner, microwave oven and television, to the questionable, including bubble gum, frisbee and the karaoke player. Not to mention the Internet. The genie was out of the bottle.

Now in the 21st century our world is surely unrecognizable, and mostly unfathomable, to our great grandparents. The industrial world has evolved and matured, drawing out every ounce of efficiency and effectiveness that could be gained from two centuries of continuous improvement.

In the digital era, new laws apply. More and more, incremental growth and continuous improvement are neither valued nor celebrated. For centuries preceding the industrial boom, progress had been slow and steady. Suddenly the growth curve has taken an exponential turn upward as mechanization unleashes unprecedented possibilities in every industry, and growing incomes around the world fuel consumer demand.

In the *second machine age*,¹ the convergence of digital technologies with all fields of science, combined with the ubiquitous reach of the Internet, promises a step-change that pushes the boundaries of human imagination. We are standing on the doorstep of a future yet to be invented and we find it thrilling and daunting in almost equal parts.

It's different this time

We can argue that progress is constant and history is rich with evidence of human adaptation to change of every kind. But several factors are now coalescing on an unprecedented scale to create a landscape that is foreign to our ancestors and in which the past is no longer a reliable predictor of what is to come.

Pace & connectivity

The brakes are off and we are flat-footing the accelerator of change. Everything around us is occurring at breakneck speeds. To reach its first 50 million people, the medium of radio took nearly 40 years; television took 13. The Internet took 4.

On the Web, every *one minute*:²

- 520 new Internet users come online (3.6 billion total)
- 310 new websites are launched (1.1 billion total)
- 110 million emails are sent (120 billion total)
- 8 million YouTube videos are viewed (6 billion total)
- 4 million Google searches are conducted (2.6 billion total)
- 445,000 tweets are posted (340 million total)
- 44,000 photos are uploaded to Instagram (35 million total)

The world is gorging itself on virtual interactions, seemingly without limit. We are primed to consume information immediately, continuously and voraciously.

Global Internet Subscribers June 2016

Region	Subscribers (million)	% of Population	% Growth 2000-2016
Africa	341	28.7	7,449
Asia	1,846	45.6	1,515
Europe	615	73.9	485
Latin America	385	61.5	2,029
Middle East	141	57.4	4,207
North America	320	89.0	196
Oceania	28	73.3	261
World	3,676	50.1	918

Source: internetworldstats.com

More than half of the world's population is already online. Internet subscription growth over the past two decades has soared by thousands of percentage points in the developing regions of Africa, Asia, Latin America and the Middle East. Notwithstanding, they still represent the greatest opportunity for future growth with, on average, only half of their populations connected.

Scale & interdependence

The tyranny of distance is being overcome and the boundaries created by geography, language and culture are fading as communication technologies enable unrestricted access to people and information across the globe: at least hypothetically - the capability exists but the appetite is variable.

As an indicator, countries can be compared by their degree of globalization, that is, the extent to which economic, social and political connections that transcend their national borders facilitate communication and exchange between individuals, businesses and governments.

KOF Index of Globalization 2016

Rank	Country	Ranking
1	Netherlands	91.7
6	Singapore	86.9
10	Canada	85.7
20	UK	82.0
21	Australia	81.9
25	Malaysia	79.1
27	Germany	78.2
33	UAE	75.9
34	USA	75.7
48	Japan	67.9
73	China	60.7

Source: statista.com

On the global KOF Swiss Economic Institute index, the Netherlands tops the chart of *international citizens*: those most open to, and adept at, economic, cultural and technological integration and interdependence. This table extracts just a cross-sectional sample of the 207 countries ranked by the index. European nations hold 18 of the top 20 places on this list: Singapore ranks 6th and Canada 10th. Low income and emerging nations predominate at the bottom of the list.

A considerable divergence still exists in the extent to which countries around the world are prepared for globalization – intellectually and practically. While many advanced and developing economies are recognizing the need to not only compete, but to collaborate internationally, others are either reticent or unready to fully commit to a global forum.

Yet despite the significant risks posed by cyber attacks, terrorism, organized crime, civil unrest and mass unemployment, unravelling this increasingly entangled web would be highly complicated. When it comes to recognizing interdependencies through a unified lens, global trade and security alliances, environmental protection and social multiculturalism increasingly mean that more and more individuals, businesses and governments have skin in the game. That said, an undercurrent of

protectionism is fueling a backlash against globalization that has also been gathering momentum.

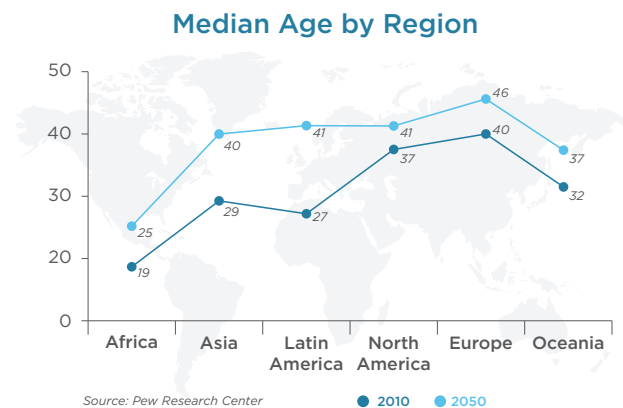
Social revolution

In contrast to the high European weighting toward globalization is the demographic rebalancing of the world toward Africa and Asia in the coming decades.

It took more than 8,000 years for the world's human population to reach 1 billion in 1800, but then the pace picked up dramatically. It took only the next 130 years to reach 2 billion in 1930; 30 years later, 3 billion in 1959; 15 years after that, 4 billion in 1974, and since then we have added an additional 1 billion approximately every 12 years.³

The African continent is the scene of the next population explosion: 2050 will witness an increase of 132% or 1.4 billion people, bringing the total population to 2.4 billion. At that point, more than one in four people on earth will live in Africa. They will also constitute the most youthful demographic on the planet.

Asia and Oceania will host 55% of the global population, at 5.5 billion, adding a further 1.0 billion to that region's human capital. The Americas will account for 13% of the remainder, and Europe just 7%. With 80% of all people on earth living in either Africa or Asia, we can expect a significant realignment of global demand and supply, and an unprecedented social and geopolitical transformation.



Add to that the reality that the entire world is aging. By 2050 we can expect a doubling of over 65 year-olds from 8% to 16% of the world's population. The global median age will rise from 29 to 36 years, but at a country and region level there is great disparity.

Countries such as Japan and South Korea will be home to the oldest populations: median age 53. Germany, Italy and Spain fare little better at 50 and China's massive population will see a median age of 46.

Citizens are increasingly concerned about the implications of this skew in their national profiles. Asked how much of a problem they believe the aging of the population to be, 55% of Germans, 52% of Spaniards, 67% of Chinese, 79% of South Koreans and 87% of Japanese respondents identified it as a *major problem*.⁴

That is the medium-term picture. In the short-term, we are already experiencing the transitional impact of multiple generations in the workplace. Millennials (born between 1981 and 2000) are hitting their strides and beginning to make their mark in the workplace. The largest generation since the Baby Boomers, Millennials now account for about 28% of the U.S. and 32% of the global population.

As a cohort, Millennials are characterized as well-educated, optimistic, socially and environmentally savvy digital natives. Younger Millennials are the entrepreneurial minds behind the proliferation of business start-ups around the world; the eldest are appearing in the executive ranks of multinational organizations.

Importantly, Millennials bring a new mindset to the workplace. They will commit to a values-based business purpose, but guarantee no loyalty. In developed markets, 61% intend to leave their employer in the next five years; 69% in emerging markets. 73% of Millennials believe business can potentially have a positive impact on wider society, but 54% are suspicious of corporate motives, believing business has no real ambition beyond making money.⁵

The social diversification of our four-generational workforce has received much attention and continues to challenge how, where, when and with whom we work. The expectations we have of our personal and professional lives and the interdependencies between them have all but dissolved the norms of the last century.

Combinatorial effects

Perhaps the defining characteristic of the 21st century is the convergence of a multiplicity of variables that are seeding truly revolutionary change:

- advances in science, medicine and technology;
- the transformation of demographic, social and political structures; and
- uncertainty about our economic and environmental futures.

This 21st century 'combo' challenges our mindsets, remodels our expectations, and reframes our relationships with each other, and with the planet. They also contest our definitions of success.

It is different this time. The future is awash with fantastic promises, unsettling ambiguities and harrowing uncertainties. Gains and losses abound across every facet of human existence:

- o since 2012, a reduction of 200 million people worldwide living at, or below, the World Bank poverty line (income US\$1.90 per day) has been achieved; albeit the goal of eliminating extreme poverty by 2030 is questionable;⁶
- o the United Nations Environment Programme (UNEP) has reported positive progress across a broad range of climate change, disaster management, ecosystem management and environmental governance programs;⁷
- o human genome sequencing is isolating DNA variations that will ultimately lead to targeted individual treatments for a broad range of medical conditions; and
- o space exploration has taken us to Mars, Pluto and landed the Philae probe on a comet travelling at 135,000 kilometers per hour.

However:

- o the International Labour Organization (ILO) reports an increase of global unemployment from 191 million to 197 million. An additional 3.4 million unemployed to join the queue in the next 2 years and 46% of global jobs classified as vulnerable;⁸
- o the Global Peace Index 2016 shows a further deterioration in world peace with only 37 of 163 countries reporting no impact of terrorism and the economic cost of violence globally at nearly US\$14 trillion (13% of the global GDP)⁹; and
- o NASA warns that global warming trends continue with average temperatures 2.4 degrees higher than in the 19th century and citing 2016 as the hottest year on record.¹⁰

Top 10 Economies

2016			2021 (forecast)		
Rank	Country	Nominal GDP (\$trillions)	Rank	Country	
1	USA	18.5	1	China	
2	China	11.3	2	USA	
3	Japan	4.7	3	India	
4	Germany	3.5	4	Japan	
5	UK	2.7	5	Germany	
6	France	2.5	6	Russia	
7	India	2.3	7	Indonesia	
8	Italy	1.8	8	Brazil	
9	Brazil	1.8	9	UK	
10	Canada	1.5	10	France	

Source: Investopedia

A global shift based on projected nominal GDP in 2021 also re-configures global economic power.¹¹ There are winners and losers. Successes and failures.

The buzzword of our time is disruption, the *forcible separation or division into parts*, and everything is on the table.

Look - it's a Unicorn!

"One person's disruptive stress is another's disruptive opportunity."

Peter Diamandis
Co-Founder/Vice-Chairman, Human Longevity Inc.

There is no shortage of enthusiastic and talented entrepreneurs around the world. Each year 450 million people create over 100 million start-ups worldwide. Many businesses don't survive – at least 30% will cease operating within the first twelve months. Of those that remain, the vast majority will fail to monetize their offerings; a small percentage will develop into solid sustainable businesses. But these are not the unicorns.

Membership to the unicorn club is open to anyone that can jump the steep entrance hurdle: a privately-owned start-up company with a US\$1 billion valuation. Investors are prepared to dig deep into their venture capital pockets to participate on the ride of these mythical one-horned white stallions.

As at January 2017, the unicorn herd numbered 208 companies, with combined valuations of US\$761 billion. They include well-known names such as Uber, Airbnb, Dropbox, Snapchat, Spotify and Pinterest. These six alone make up more than US\$142 billion, or 19% of the unicorn valuations. And there are dozens more, representing a wide array of industries: WeWork (real estate), Lufax (financial services), Sten CentRX (healthcare), Bloom (energy) and Space Exploration Technologies (aerospace and defense), to name a few.¹²

Would you be surprised to learn that the unicorn club membership growth rate is accelerating? In 2010, you could hold a dinner party and fit the club members around your dining room table – there were six. Three years later, you were holding a cocktail party for 45 and by the end of 2016 you could host a dance party with 208. That's an annual compound growth rate of over 81%.

What's more, unicorns are going global. Once you could find them only in and around Silicon Valley, California, but today there are unicorns across

the U.S., nearly 30% are based in China and they can be found in India, Singapore, Canada, Sweden, Germany, the U.K., Korea and Luxembourg.

Many unicorns go on to be acquired or listed as public companies via IPOs. Unicorns that have made this metamorphosis into public enterprises include Facebook, Alibaba, Twitter, Atlassian, GoPro, LinkedIn and 32 others. And all the while the stable of unicorn foals is growing: companies steadily climbing toward the billion-dollar threshold currently number 64, including such names as Delphix, Quora, Hootsuite, Flipboard and Foursquare.

Here's the thing about unicorns – they disrupt. They disrupt so hard and fast that long-established industry incumbents are usually caught unawares. The well-known story of Kodak's demise as it failed to embrace the digital photography revolution (ironically, invented in its own laboratories) shows the destructive speed and force of digital disruption. And investors are prepared to pay handsomely for the potential that unicorns have to innovate and reinvent.

But disruption does not just put single companies out of business: it shakes the very foundations of industries and markets. Not a bad thing in many cases – consumers benefit from better, faster, cheaper products, services and experiences. Ultimately, disruption is demand driven and can only succeed by transforming something inefficient or ineffective, launching something new and innovative, or vastly improving the user experience. As noted by Peter Diamandis - a pioneer in innovation and commercial space travel - *disruption creates stress for the disruptee, but opportunity for the disruptor*.

And the cohort that is most impacted and displaced by all this disruption is the human workforce.

The top 10 unicorns are valued at a combined US\$324 billion, yet employ only an estimated 40,000 people. On average, that equates to US\$8 million of company value for every 1 employee. Compare that with Apple Inc. at about US\$0.5 million of company value for every employee, or Walmart at US\$0.1 million. The message is stark: the unicorns spawned of the digital era require very few employees to generate very high market values.

This is the paradox of the war for talent today: while the demand for specialized skills is high and frequently unfulfilled, the overall unemployment threat around the world continues to rise.

The hole in the middle

At first glance, it might be reasonable to assume that the jobs created in the digital economy will require higher-level skills – especially those with STEM (science, technology, engineering, mathematics) prerequisites. This is certainly true of many jobs in many industries – jobs requiring applied technical expertise, creative problem solving, strategic decision-making or people leadership. But that is only part of the story.

Low-skilled jobs (requiring basic secondary and no tertiary education) such as cleaning, food preparation, social services and security are equally as difficult to automate, eliminate or send offshore, as high-skilled jobs. What high and low-skilled jobs have in common is this: they are *non-routine*.

Layered between these jobs are moderately skilled jobs – those requiring some education and training - and include jobs in construction, manufacturing, sales, office administration and transportation. Many of the tasks undertaken in these jobs are *routine*. Tasks that are routine lend themselves to automation and outsourcing because they are predictable and repetitive. These jobs represent the largest proportion of the workforce, and also that proportion under the greatest threat of decline. One U.S. study found that moderately skilled jobs have shown the highest rate of contraction over the past three decades – representing 59% of the workforce in 1983 and just 45% by 2012.¹³

This polarization of work, with demand for high and low skilled occupations increasing, while that for moderately skilled jobs decreasing, is creating an employment hole at the heart of where the bulk of today's jobs are categorized. It will spawn a massive wave of re-education, re-training and redundancy.

But how many new jobs will the digital revolution create?

Lots. No question. New job titles that have never before existed are appearing every day. And these are just the ones that have already been 'invented' in industries and markets that already exist. There is enormous scope in the realm of the unknown: jobs yet to be crafted, to complete work yet to be defined, addressing challenges yet to be imagined.

Historically, the industries of the future have absorbed the labor they have displaced. In the digital era, will they do so in equilibrium? Our current experience of the impact of unicorns on workplace displacement would suggest there is a significant imbalance: technology appears to be taking the place of much of human labor.

Jobs in agriculture and manufacturing have already shifted from high-touch to high-tech. Thousands more mid-level jobs in the professional services, retail, technology and education sectors are in a steady transition toward automation. This shift comes at a time of changing attitudes toward work and a new wave of employment trends.

Work Forever

“Making the most of the gift of a long life requires everyone to face up to the truth of working into your 70s or even 80s. Simple as that.”

Lynda Gratton & Andrew Scott
Authors: The 100-Year Life

The good news: your chances of being alive to blow out the candles on your 100th birthday cake are pretty high. The estimated odds have increased from 20 million:1 to 50:1 in low mortality countries. The World Health Organization forecasts a near doubling of the percentage of over 60 year-olds in the world population between 2015 and 2050, from 12% to 22%.¹⁴ That’s over 2 billion people.

The bad news: neither you nor your government’s social security system can afford your retirement. Most of us will have to work. Hopefully not until our 100th birthdays, but quite likely to our 80th.

That may well be good news too. Advances in science, technology and medicine are enabling longer, healthier, more active lives. Far from opting out of the workforce, many older adults are keen to continue their participation, encouraged, no doubt, by continuing evidence that work and longevity are correlated.

A recently completed longitudinal study of U.S. retirees upholds the anecdotal observations of many that working longer extends your lifespan. Continuing to work for even one year beyond retirement age was shown to reduce mortality rates by 11% independent of socio-demographic, lifestyle and health confounders.¹⁵

Workforce Participation Rates in Over 60’s

Country	Male/ Female	Age 60-64	Age 65+	% Decrease
USA	M	60.5	23.6	61.0
	F	50.4	14.4	71.4
Japan	M	75.4	28.7	61.9
	F	45.8	13.4	66.4
Singapore	M	74.6	32.4	56.6
	F	41.7	13.7	67.1
Germany	M	58.9	7.1	87.9
	F	41.1	3.3	92.4
Brazil	M	62.0	30.0	51.6
	F	30.0	11.7	61.0
Australia	M	62.6	16.8	73.2
	F	44.5	7.8	82.5

Source: U.S. Department of Commerce

For a longer work lifespan to eventuate however, some significant changes need to occur in government policy, organizational culture, and individual expectations. Workforce participation rates for age brackets 60-64 years and over 65 year olds in a sample of countries around the world are shown in this table.¹⁶ On average, male workforce participation declines by over 65% by age 65 and female participation declines by over 73%. Today, on average, only 1 in 4 males over 65 continues in paid work and only 1 in 10 females.

Governments on the whole have been slow to react and policies have been lacklustre in their impact. It is one thing to simply lift the official retirement age to defer triggering pension access – another to support employers and employees with work continuity programs, including retraining, job restructuring and flexible work practices.

Further, most organizations are not moving quickly enough to capture and channel the accumulated knowledge and experience of their older workers in revised ways that can benefit the entire business. And ultimately, individuals need to embrace the value – social, financial and professional – of staying active in the workforce, rather than viewing work as a compromise to their lifestyle.

One of the most pervasive legacies of the industrial age is the mindset we inherited about the structure of work and life. The ‘three-stage-life’, consisting of Stage 1 education, Stage 2 work and Stage 3 retirement, became hardwired into the 20th century mindset.¹⁷

But that linear pathway cannot survive in the future of work. The certainty of rapid change will demand that we continuously learn, unlearn and relearn, that we hold a portfolio of careers and work experiences and that changing modes of work keep us employed in some fashion long after the official retirement age. The concept of retirement could disappear altogether.

Optimist or pessimist?

The World Bank heralds an era in which technology will create opportunities in both developed and developing nations that allow workers to tap the digital dividend released from jobs of the future. It also cautions against the growing inequality of income distribution as countries scramble to assess the digital environment and implement policies that position them to take advantage of its potential.¹⁸

Neither high nor low income countries will be sheltered from the disruptive impact as technology steamrolls through the global economies. Jobs will disappear. Demand for new skills will emerge. Economic power will shift. Policy makers and business leaders will navigate uncharted terrain.

Optimists argue that workers displaced by technological advancement and job redundancies will re-skill and re-emerge in the new jobs and industries also created by progress. They will point to history for evidence: the industrial revolution created millions of new jobs for displaced agricultural workers; knowledge work did likewise for those displaced in the industrial era. Essentially, humans are adaptable – they always have been – and the digital age will see better, cleaner, safer work for humans.

That’s all well and good if, as a worker, you have the capacity, capability and career runway left for self-reinvention. The digital revolution is not following a pathway of incremental progression. Instead it drives exponential change: jobs now automated that were once filled by humans don’t just phase out over time, they disappear fast. By 2024, U.S. government statistics forecast a greater than 25% decline in workers employed as molders, casters, machinists, switchboard operators and postal workers.¹⁹

A pessimistic view stakes as evidence the very real experience of tens of thousands of moderately skilled and low skilled workers whose jobs, and sometimes industries, have vanished.

For many countries, there is a strong argument that increasing automation of work is entirely necessary to offset the demographic challenges facing them over the next three decades. China and Japan, for instance, have embraced technological progress in the workplace not only due to cost considerations but also because their future human talent pools are unable to keep pace with labor growth demands. For example, Japanese robotics engineers are fast developing humanoids capable of caring for the elderly in response to forecasts of a vast shortfall of nurses in their future workforce.

Digital Dividend
The aggregate developmental benefit derived from the use of digital technologies.
World Bank

As we march toward the United Nations global population estimate of 9.7 billion by 2050,²⁰ growing pains are becoming increasingly evident. In the developed world, high labor costs underpin the drive for automation and the movement of work to offshore centers that can sustain a cost advantage.

That said, there is an emerging trend for jobs in industries such as manufacturing to return from their off-shored locations. Multinational corporations including Caterpillar, Walmart, General Electric, General Motors, Ford and Boeing are spearheading the home-coming trend: all have announced actual or forecast ‘re-shoring’ programs to return thousands of manufacturing jobs back to the U.S. from offshore locations. Anti-globalization activities are highly likely to gain traction in a post-Brexit and Trump environment, with protectionist policies winning the votes of a swelling mass of displaced local workers.

Even so, workers and unions should restrain their enthusiasm. Gains to the human U.S. manufacturing workforce will be tempered by technology advancements in 3D printing, robotics and artificial intelligence that underpin their return. While 70% of businesses recently surveyed believe these advances will bring manufacturing closer to home, low and moderately skilled jobs are unlikely to resurface.²¹

At the same time, the past beneficiaries of corporate offshoring programs will suffer. It will be lights-out in the factories of Asia, South America and southern Europe as foreign multinationals withdraw their manufacturing plants. Whereas the developing nations once held a cost advantage due to their low wage labor supply, production efficiencies and technology advancement have steadily depleted this arbitrage.

Further, the developing world is equally turning to manufacturing automation to compete in global markets. This means large populations of under-skilled and undereducated workers in those countries are failing to find work, and incomes and living standards will consequently remain low.

It appears to be the blessing and curse of our age: enormous progress in science, technology and medicine are improving the quality and duration of our lives while simultaneously creating the conditions for mass labor redundancies.

As the years continue to be added to our life expectancy, we can ask ourselves, *what will we do with them?*

The Place to Be

*“Liberated from old constraints, prepared to go
where their talents are best supported,
an urban workforce will reshape work and its settings.”*

Gensler Design Forecast

When you ‘go to work’ in the future, where exactly will that be?

Perhaps you already work in a high-tech, next-generation workspace, ergonomically designed to optimize light, space and energy, with collaboration and concentration zones, relaxation and social hubs, all conducive to inspiring interaction and innovation.

Or perhaps you don’t go to work at all, rather work comes to you. Equipped with mobile devices and Internet connectivity, work happens wherever you are – at home, a dedicated work center, a café, an airplane or a park bench.



Town planners, urban architects and office designers around the world are actively, in concept and reality, building the smart cities of future. Fuelled by the megatrends of interactive digital technology, flourishing urbanization, co-created consumables and an intolerance for wasted time and resources, neo-industrial cities will reshape the physical spaces we inhabit and their impact on our enjoyment and productivity.²²

Redefining the workspace

Consider some emerging trends:

Office of the future

Glass towers housing hundreds of clinical grey cubicles and claustrophobic meeting rooms are being gutted and redesigned as open, bright and engaging workspaces.

These offices provide employees with a range of work zones that align to the needs of individuals and teams depending on whether their projects

and tasks require collaborative ideation, interactive problem solving, virtual participation or focused immersion.

Equally, they provide space and facilities for social connection, team play, rest and refresher activities, all designed to work with, not against, the natural work styles, biorhythms and preferences of workers to optimize their well-being, creativity and productivity.

Shared office

Akin to the migration of in-house enterprise systems to software-as-a-service (SaaS) platforms hosted in the cloud, many organizations are shifting their physical offices from owned/leased and centralized facilities to time-shared and decentralized ones in purpose-built hubs, housing state-of-the-art technologies and meeting places.

These come-and-go facilities provide considerable cost advantages, flexibility and just-in-time services tailored to the needs of small, medium and even large organizations with employees that travel extensively or live in locations far from headquarters.

Remote office

How much does the daily commute to work cost?

- the direct costs: public transport or motor vehicle, parking, tolls and taxes
- the productivity costs: lost time and energy wastage
- the environmental costs: pollution from carbon emissions and our environmental footprint.

Not surprisingly, many organizations and employees are counting the potential savings of replacing the daily commute with teleworking. Coupled with the liberating technologies already available and still to come, the frustrating and tiresome commute to and from work may soon be a thing of the past.

Cisco envisions a future of integrated devices that enable seamless transitions between smartphones, tablets, wearables, computers, televisions and interactive desktops. In this environment, work tasks and team interactions flow continuously without disjointed connectivity and unproductive disruption.²³ Indeed, the lines distinguishing home and work blur and workers can achieve substantial gains in flexibility, productivity, autonomy and engagement.

Global office

Perhaps the best skills required for a project are not in physical reach at all. As we will see in Chapter 2, the location in which talent resides becomes less material and certainly less of an inhibitor to accessing it than has been the case in the past.

If your expertise is in computer programming, software engineering, accounting or auditing, you might be especially sensitive to the growing trend toward sending your job overseas. In 2015, 2.4 million U.S. jobs were sent offshore and 38% of CFOs surveyed confirmed their organization outsources work offshore. Not surprising, given the benefits to be gained are reported as: reducing costs (44%), gaining access to superior IT resources (34%) and freeing up internal resources (31%).²⁴

Top Ranked Countries for Outsourcing



Source: statisticbrain.com

As the list of top rated countries for outsourcing shows, the beneficiaries of this migration of work are predominantly developing countries. These countries have made significant investments in both their technology infrastructure and the skills of their national workforce to position themselves attractively in the world labor market.

We can expect that our future work colleagues will not only be diverse in terms of backgrounds and skills, but also in their geographic location.

Virtual office

What if we abandon our assumption that the workplace is a physical space altogether? What could a truly functional virtual office look like and how would it impact how and with whom we work?

Virtual conferences enabling speakers to share content, interact with delegates, for vendors to showcase their offerings and participants to network, already exist on platforms such as Unisfair and vFAIRS. These virtual environments put conferences, trade shows and job fairs online and deliver significant cost and time savings through seamless digital efficiency.

In the virtual world of Second Life, organizations can create entire workplaces populated by the avatars of real employees to work together on projects, attend training and development programs and interact as a team.

We could go one step further – replacing the two-dimensional screen experiences of today altogether with three-dimensional holographic environments. Microsoft's HoloLens headset brings the virtual world into sharp reality by projecting any customized scene, including the people in it, into the virtual space around us.

How far away are we from a project meeting in which our colleagues appear in holographic form from multiple locations to collaborate in one place? In fact, it's already been done. In April, 2016 Accenture CEO Pierre Nanterme and CHRO Ellyn Shook appeared on stage together in Chicago to discuss talent management: except Nanterme's holographic presence was beamed live from a studio in Paris, and Shook's from New York.²⁵

In the future, we can expect to reframe our concept of work from 'somewhere we go' to 'something we do'. Underpinning this reframing is a workplace that refocuses our measures of employee productivity: from an emphasis on input to an emphasis on output.

Input measurement upholds the industrial age ethos that productivity is a function of time and effort. It leads to:

- employees limiting effort to defined tasks and job descriptions
- supervisors micro-managing to quantified performance indicators
- a culture of presenteeism and protectionism.

Output measurement is critical to optimize performance in the digital era. It leads to:

- employees taking responsibility for individual and team performance
- managers providing goal clarity, coaching workers and removing obstacles
- a culture of autonomy, accountability and results.

The *workplace* of the future will have multiple definitions and manifestations. Advances in technology and design architecture are radicalizing the concept of the workspace, at the heart of which will be the creation of a locus for active, creative, productive work participation, not constrained by physical boundaries or out-dated mindsets.

The Sharing Economy Comes to HR

“Cloud resourcing reflects the ability of organizations to access a global talent network that offers a greater range of skills, on a more cost-efficient basis, than is available from traditional models of employment.”

Jon Younger & Norm Smallwood
Authors: Agile Talent

Society is fast adopting the shift from a mindset of ownership to one of sharing. The sharing economy has already disrupted many long-standing, seemingly entrenched industries: from how we listen to music, read books and watch movies, to where we stay when we travel, to how we transport ourselves around town and country. It seems we love to share.

In the sharing economy, we mostly think of sharing tangible resources, such as cars and homes. Why would the concept of sharing, rather than owning, not extend to the talent employed in organizations? We are already rethinking the relationship between employer and employee: perhaps these terms will even become redundant.

Increasingly, the peer economy (also referred to as the gig economy) is gaining traction. Given its aqueous nature, size estimates of the gig economy are variable. In the decade to 2015, one U.S. study shows a 56% rate of growth in contingent workers (defined as independent contractors, freelancers, on-call workers, company contract workers and temporary help agency workers), from 10.1% to 15.8%.²⁶ A recent Time Magazine poll counted all those who have participated in this market at some point and put the U.S. number at around 90 million – or 44% of working adults.²⁷ In the U.K. recent estimates count ‘gigsters’ at 5 million, or 11% of the working age population.²⁸ Globally, no accurate count exists – but it is safe to say, the number is large and growing.

Unicorns such as Uber, Lyft and Airbnb are frequently credited for, or accused of, generating these contingent jobs, but of course, casual, part-time and contract workers were a component of the workforce long before their arrival. ‘Brokers’ of contingent work such as TaskRabbit, Freelancer and Upwork, have also contributed to the spiked growth of this mode of employment in the last two decades.

Equally, we cannot underestimate the demand for flexible workers by organizations that have scarcely survived the deteriorated and uncertain economic conditions since the Global Financial Crisis. Combined, these are all accelerants of a new multi-modal workforce structure that also aligns with changed worker preferences and the advent of technologies that facilitate this.

Gig Economy

An online marketplace in which services are exchanged for a fee and levels of integrity are maintained via ratings and full two-way transparency.

Equality in the gig economy

Whether by design, ambivalence or employment regulations, contingent workers have historically ranked as second-rate citizens in most organizations. At best, viewed as short-term external skills or expertise, at worst, dispensable hired hands. Either way, they have been pooled in a category that typically denies them many of the monetary, social and professional development benefits enjoyed by permanent employees.

Denise Cheng of the Roosevelt Institute says *“for its cheerleaders, the peer economy represents greater independence and the blossoming of entrepreneurship.”*²⁹ Clearly, among the motivations to participate in the gig economy are freedom, autonomy and the prospect of a much-expanded career portfolio. Gig work also suits many Millennials with the skills, talent and digital resources to concurrently juggle multiple projects and employers, accelerating their earning capacity and professional networks.

But being classed as ‘talent on demand’ also has its shortcomings. Lack of the worker benefits usually provided by employers, legal protections, the potential for financial disadvantage due to inconsistent or piecemeal work and commoditized skills that become devalued in an open global market, to name a few.

One key career ingredient that is typically lacking for contingent workers is ongoing learning and development opportunities sponsored by their employers. Except for a few forward-thinking organizations, contingent workers are rarely invited to participate in employer-funded training or management development, not given mentoring or leadership opportunities, nor sponsored for advanced technical or professional skills development. That will prove to be a short-sighted approach that reinforces the paradigm of contingent workers as temporary and dispensable resources. In reality, such workers will make up a significant component of many high-performing teams in future.

Managing a fluid workforce

For the last two decades, employers have fought the escalating war for talent. Rather than this war abating, it is gaining intensity on many fronts – especially in professions requiring advanced science, technology and engineering skills.

Organizations, leaders and managers and employment policymakers are ill-prepared for an agile workforce that will assess its own career portfolio opportunities and vote with its feet. Almost every employment practice that exists today can and should be dismantled and scrutinized for its propensity to either help or hinder the talent attraction and retention demands of the business.

To prepare for the future, employers need to rethink their workforces. It boils down to this: employers have an ownership mindset about their employees, but as Orly Lobel aptly notes in the title of his book on the topic, *talent wants to be free*.

The skills and mindset required to effectively manage the workforce of the future are, predictably, different from those that succeeded in the past. The premise that authority, know-how and decisions cascade from the top is already coming undone. If your leadership repertoire is limited to a command and control style, you will have some soul-searching to do.

While the hierarchy is undoubtedly likely to become more egalitarian, technology itself may play a significant role in future workflow management. As is already the case with Uber for example, machine algorithms are effectively replacing the role of supervisors and managers, by sourcing work, assigning it to workers and managing performance via feedback and ratings. An algorithm could be your next boss.³⁰

For both HR and business leaders, the three intelligences that follow will be the key determinants of effective workforce management in the future.

The 3 HR Intelligences

"Intelligence is the ability to adapt to change."

Stephen Hawking
Physicist & Cosmologist, University of Cambridge

Each of the transformational eras we have endured over the centuries have yielded winners and losers. The winners have foreshadowed the oncoming revolution and adapted to elevate their likelihood of prospering in it. The losers have not.

In the digital era, we see a shift in the skills and mindsets necessary for HR to survive and excel. Harnessing these skills and mindsets will act as a personal and professional competitive advantage. People thriving in the future of work will demonstrate them in abundance. Failure to do so will be career limiting.

We define these skills and mindsets as three HR intelligences:

- Digital intelligence
- Cultural intelligence
- Business intelligence

In the Talent Lab, we assessed HR on these *future of HR* capabilities: the results appear in the Boot Camps that follow.

1. Digital Intelligence

The first challenge for HR success in the future is gaining adequate digital intelligence. Today's children grow up as digital natives: one U.S. study shows the average age for children to own a smartphone is now 10.3 years,³¹ although children as young as 2 or 3 are accessing their parents' phones and tablets to play and learn. 92% of teenagers report they access the Internet daily, with 24% admitting they are 'almost constantly' online.³²

Familiarity and comfort with all things digital comes naturally to the Millennial generation and is even quite common among the digital immigrants that precede them. That said, having the ability to access and interact with online content is not digital intelligence - in the same way that acquiring a driver's license and driving a car does not a motor vehicle mechanic make. Most users can claim digital proficiency - a foundational element of digital intelligence.

Digital intelligence is a quantum step up from digital proficiency. By its definition, digital intelligence requires a strategic understanding

Digital Intelligence

Understanding the strategic power of information technology and having the ability to execute digital strategies for competitive business advantage.

of technology capabilities in the context of the business challenges it can solve. Having the ability to sync your devices, optimize your smart TV or master Excel macros won't give you this.

Less than half the organizations relying on strategic data analytics to drive their customer experience and compete in the digital world believe they have employees with sufficient capabilities to achieve these ends. A consistent finding is that a digital culture and mindset is a prerequisite for organizational digital intelligence to thrive – but many organizations are still constrained by analogue leaders.³³

What it means to have digital intelligence

At an *individual level*, digital intelligence is about advanced computer skills and a strategic mindset for their application. Educational institutions are quickly shifting their focus to build digital skills into school curricula to better prepare our next generation workforce. The popularity of coding camps and digital summer schools for kids aged as young as five, is testimony to the elevated interest and urgency given to developing this digital foundation.

For the adult workforce, maintaining the currency and relevance of digital skills will be a lifelong endeavor. Frequent advances in digital software and hardware are already the norm, and an ongoing interest and investment in learning and relearning will be the only way to future-proof a career in the digital world.

At an *organizational level*, digital intelligence (also referred to by McKinsey & Company as digital quotient) means building a digital platform comprising of:³⁴

- a *strategy* that optimizes your products and services for digital
- the people and technology *capabilities* aligned to that strategy
- an organizational *culture* that promotes and recognizes digital innovation, and
- business processes and performance indicators that enable and reward the implementation of a digital strategy.

Business leaders, managers and professionals need to think and act strategically about the possibilities, challenges and potential disruption that digital progress will uncover in their business and industry.

For HR, digital intelligence means rethinking the processes and measures of the organization's human resources to optimize the digital strategy, including:

- organizational design and structures that accelerate information flows, collaboration and innovation

- talent acquisition and development initiatives that actively source and build the digital skills needed by the organization's workforce
- key performance indicators that align individual contributions with business outcomes, and
- embracing HR technology and analytics to underpin data-driven human capital strategies.

In the Talent Lab, discussions with both industry thought leaders and HR executives drew a similar conclusion: today's HR teams demonstrate moderate digital proficiency but, on balance, poor digital intelligence. The gap is at the level of *conscious incompetence*, meaning HR professionals are generally aware of their shortcomings and the need to significantly improve this capability in order to reach the level of contribution expected of them from their business stakeholders.

We explore digital intelligence further in Chapter 2.

2. Cultural Intelligence

The second challenge we found to be critical to HR in the digital era is gaining mastery over cultural intelligence – in its varying forms.

While general intelligence, or IQ, is a hygiene factor underpinning core capability, the 'new' intelligences, including cultural intelligence, are frequently highlighted as differentiators of performance and effectiveness.

Many will attest to the career limiting impact of a lack of cultural intelligence. It is complex and multi-dimensional and can baffle and expose the most technically competent leaders. In the multi-cultural, multi-national workplace of the future, cultural intelligence is a prerequisite for leadership and success.

Due to its complexity, we break cultural intelligence into three sub-elements:

- Social & emotional intelligence
- Cross-cultural intelligence
- Organizational intelligence

Social & emotional intelligence

Popularized by U.S. psychologist Daniel Goleman over two decades ago, *emotional intelligence* refers to the extent to which individuals understand their own and others' emotions and emotional responses, and can apply this knowledge to adapt their behaviors effectively.

Measures of emotional intelligence assess factors such as emotional self-awareness, empathy, impulse control, flexibility and optimism. Psychometric

Cultural Intelligence

Understanding and appreciating cultural differences and having the ability to work effectively in a variety of cultural settings.

tools designed to measure emotional intelligence are popular for both self-evaluation and as multi-rater feedback instruments, providing a holistic picture of an individual's understanding and application of their emotions.

Social intelligence can be seen as an extension of emotional intelligence, in that it requires individuals to apply their understanding of emotional cues to effectively navigate the sometimes complex social scenarios and relationships found in organizations.

Together, social and emotional intelligence have gained credence as defining characteristics of effective leadership in the modern workplace. A study of Whitbread U.K. managers showed statistical correlations between emotional intelligence and both organizational productivity and annual profit growth.³⁵ Since then, dozens of corporate studies at companies including Google, Pepsi, GE, American Express, Zappos, L'Oreal, MetLife and Sheraton have consistently associated high emotional intelligence with higher business and leadership performance.

That said, emotional and social intelligence remain underdeveloped and poorly demonstrated competencies in many leaders today. These so-called *soft skills* are among the hardest to develop: partly because high levels of self-awareness and emotional maturity are necessary, and partly because it calls on a fair amount of unlearning of existing habits and behaviors to precede the learning of new ones.

Cross-cultural intelligence

It stands to reason that if your workforce is made up of workers with a multiplicity of cultural and national backgrounds, you are bound to encounter some expected and unexpected differences. It's not rocket science, but it turns out there is quite some neuroscience behind this.

The seminal work of Geerte Hofstede in this field gave us the individualism versus collectivism dichotomy that has proven to be an effective broad-spectrum description of the behavioral differences regularly experienced when interacting with Western versus Eastern cultures.³⁶

Individualist cultures (such as those of the U.S., the U.K. and Australia) value individual achievement, open communication, competition, personal accountability and self-actualization. In these cultures, individuals strive to succeed for personal gain and satisfaction and may put the task or job ahead of relationships.

Collective cultures (such as those of China, Brazil and North Korea) value communities and families and subrogate individual needs for the needs of the group. These cultures are notable for their emphasis on achieving harmony, sharing possessions and responsibilities broadly, and putting personal relationships ahead of a task or job.

Could these variations impact how teams are best led, how they solve problems, collaborate, respond to feedback, deal with conflict and communicate? Absolutely. Understanding and adapting to these differences, therefore, makes cross-cultural intelligence an essential component of effective leadership and human resources management.

Organizational intelligence

Understanding the culture of the organization is the third facet of cultural intelligence we believe to be a critical success factor for HR.

Being aligned with the organization's values, aware of the norms of behavior (from dress code to communication protocols, social interactions and business priorities) and being accepting of the spoken and unspoken 'laws', is key to successfully navigating the terrain of any workplace.

Being *politically savvy* is one aspect of organizational intelligence. While the flattening of organizational structures and diffusion of leadership to all levels of business is becoming more common, the reality for many is that concentrations of power among groups of influencers exist and must be managed appropriately. Political savvyness applied effectively means people understand the organizational landscape, what is acceptable and can navigate the terrain to produce win-win outcomes for individuals and the business.

That said, organizational harmony can quickly turn to dysfunction when adverse political agendas are in play. A recent study finds that organizational politics can induce employee silence: the withholding of information due to poor relationships, disengagement or the perceived need to be on the defensive.³⁷ Most employees will be able to relay personal accounts of experiences they have had with organizational politics.

Organizational intelligence recognizes that effective leaders and employees cannot achieve the best outcomes operating in isolation. They work in an ecosystem of complex interdependencies. Understanding and using these to everyone's advantage is critical to mastering this skill.

What it means to have cultural intelligence

To demonstrate cultural intelligence is to be effective in harnessing the organization's human capital to get things done. That requires an understanding of the organizational environment and the makeup of the workforce. Importantly, it means being able to observe, adapt and revise approaches depending on the cultural nuances posed by the business and individuals in it.

At an *individual level*, cultural intelligence is demonstrated by:

- a curiosity mindset that seeks and welcomes feedback and learning
- an openness to adapt in response to situational cues, changing people and business priorities, and
- a preparedness to avoid the traps of stereotyping, unconscious biases and factional power-plays.

For *HR*, there is a significant role to play in developing the organizational infrastructure that supports cultural intelligence:

- taking the lead to establish an organizational culture that values diversity and inclusion
- investing in the development of cultural intelligence as a competency at all levels, and
- ensuring that recognition and rewards align with the behaviors and outcomes consistent with a culturally intelligent workplace.

We explore cultural intelligence further in Chapter 3.

3. Business Intelligence

“The lion’s share of the problem is the poor business competencies in HR – the lack of mastery of the subject matter, personal qualities of leadership, and understanding and being effective in the political scene.”

Naomi Bloom
Managing Partner, Bloom & Wallace

There is, unquestionably, a cohort of HR professionals that *gets it*: the value of HR lies solidly in its ability to align the organization’s current and future human capital needs with the business goals they were hired to achieve. Unfortunately, these HR professionals remain in the minority.

There have been far too many conferences, workshops, programs and courses on *HR business partnering* conducted over the past two decades to suggest that the shortcomings can be in any way attributed to a lack of awareness or even understanding of the fundamental need for HR to support the business drivers. HR even created the job title of HR Business Partner to show they know what needs to be done. That we are still talking about it – and what’s more, isolating business intelligence as a critical HR competency in the future of work – points to a lack of capability and/or execution in delivering it.

It is no accident that an increasing number of top-rated HR professionals have some form of commercial background. Tertiary qualifications in human resources management

Business Intelligence

Understanding the business drivers, systems and capabilities and having the ability to contribute strategic advice based on workforce analytics.

provide a good academic grounding in HR practices and processes (albeit predominantly in those with industrial-age genealogy and relevance). But that is not enough for applied HR management in the digital era.

As is the case with other competencies, business intelligence lends itself to development and should be a staple on the development plan of every HR professional. If human resources leaders and team members are increasingly being sought from business, not HR, backgrounds, it would suggest that HR skills are more readily developed in business people than business skills are developed in HR people. There is little foundation for such a theory: in fact, both are learned skills and equivalent in their scope and challenge.

Notwithstanding, by external perception and internal admission, business intelligence in HR is under-done, though the pathway is clear: invest in the development of this skill.

What it means to have business intelligence

For *individual* HR professionals, demonstrating business intelligence means:

- bringing actual commercial experience to the table (from an operational and/or customer-facing role)
- pursuing business studies and qualifications
- challenging entrenched HR processes, and
- having a mentor in the business operations.

For *HR executives*, business intelligence takes the form of:

- active participation in strategic business planning
- accountability for some non-HR business outcomes, and
- representation on business or industry councils.

For the *HR function*, business intelligence means:

- having a business value litmus test for all HR practices
- integrating science and technology innovation in HR, and
- driving agile HR reform.

We explore business intelligence further in Chapter 4.

The three HR intelligences we propose do not replace, rather build on, the core HR capabilities necessary for this function to be effective. These intelligences are closely linked to the strategic elements required by business leaders and managers to fully value HR’s contribution to organizational performance.

The HR Strategy Chasm

“The focus on accountability, results and creating value is critical to the success of the HR function.”

Jack & Patricia Phillips
Authors: High-Impact Human Capital Strategy

One sure way to increase the blood pressure of any HR executive is to raise what has become a perennial criticism of the HR function: the lack (perceived or otherwise) of strategic alignment with the organization's goals and an approach dominated by tactical processes rather than business outcomes.

This activation of the sympathetic nervous system mostly triggers one of two reactions:

- excitement, fervor and a passionate defense of the progress HR has made, its valid ‘seat at the table’ and the indisputable strategic impact of human capital on business outcomes; or
- defiance, resignation and more than a little frustration that this feedback continues despite the earnest attempts of HR to become a strategic partner.

When business talks strategy, it's definitive. Business strategy will focus on:

- *value creation*: how the business can increase existing or unlock new value for its stakeholders via tangible (such as financial) or intangible (such as innovation), assets
- *competitive advantage*: how the business can distinguish itself from competitors, comparatively (e.g. scale, systems, cost) or differentially (e.g. brand, technology, expertise)
- *results*: how the business performs on financial indicators, market share, customer satisfaction and sustainability.

When HR talks strategy, it's complicated. Granted, *people* are a formidable challenge to rational strategists seeking to put clear and unequivocal plans in place. Observers note that *“if the people could be removed, the problems would go away; there would be no complaints, charges, gripes, grievances, accidents or work stoppages.”*³⁸ Of course, together with cost advantages, this rationale underpins some of the drive toward work automation, which we discuss in more detail later.

The complication in HR strategy formulation often rests with the blurring of *what* the HR function needs to contribute to the organization and *how* it will achieve this. Discourse in the Talent Lab has highlighted two distinct but integrated strategic responsibilities HR executives have in the organization:

1. contribute to the overall business strategy, and
2. align the HR strategy to that business strategy.

Key word: *alignment*. Alignment of:

- *organizational culture*: creating a work environment that engages talent, rewards effective mindsets and behaviors
- *organizational capability*: mapping the current and future skills and expertise needs of the business and activating all efforts to attract, develop and retain them
- *productivity and performance*: optimizing human capital outputs by creating the conditions for discretionary effort and high performance.

In addition, with the business shift to digital, a more recent progression has been to incorporate a HR technology strategy into the mix.

HR technology as a strategic driver

HR strategies define HR practices, some of which can be enabled via technology. That has been true during the evolution of HR technologies, many of which simply automated existing forms and enabled better tracking and control of HR data. During this time, technology provided tactical support for HR initiatives.

Times have changed. With the significantly advanced capabilities of HR technology today, not only to provide the housing and infrastructure for HR data, but also to mash, interrogate and extrapolate this data, HR technologies are playing a strategic role in an organization's ability to assess, forecast and optimize the workforce.

Global analysts Sierra-Cedar deemed 2015-16 *“the year of HR enterprise system strategy”*. Their research notes that 60% of high performing organizations have an initiative to create or improve their enterprise HR system strategies. Moreover, organizations with such a strategy have demonstrated system cost savings as well as reduced HR headcount as a proportion of the organization's workforce.³⁹

HR and strategic foresight

In the turbulence generated by business demands and technology transformation, it is perhaps understandable that the associated noise and rampant activity can cloud visibility and make the present the focal center of attention. Many HR functions are scrambling just to keep pace with the momentum of change, let alone set foot in the future.

Strategic foresight provides a means of navigation through this turbulence. It combines methods, tools, technologies and actions to establish an accurate description of both the current and future business environment of an organization.⁴⁰ Strategic foresight enables business leaders to better predict possible future scenarios in order to maximize opportunities and minimize the associated risks.

Unfortunately, a lack of strategic foresight is the root cause of many of the ‘wicked’ problems that confront HR: problems that create a seemingly endless cycle of additional problems and are frustratingly solution-resistant.

In Chapter 5 we highlight the importance of strategic foresight in the context of innovation, with insights from our Talent Lab contributors from Kedge, a leading consultancy specializing in applied strategic foresight.

The best HR teams have focused HR strategies that are understood and agreed by business leaders and provide a clear line of sight between the challenges of the future and how the organization’s human capital will meet them.

What is your strategy for the future of work?

The Big Questions for HR

*“There are no right answers
to wrong questions.”*

Ursula K. Le Guin
Author

Emerging image: the future of work looks very different, it is already here and it is continuing to advance at turbo pace. Perhaps in desperation to gain control, we continue to apply approaches to new challenges that are time-tried-and-true.

Over the course of the past twelve months and three in-depth Talent Labs, we draw the conclusion that HR finds itself standing on the precipice. Over the cliff edge is a volatile, uncertain, complex and ambiguous (VUCA) landscape and the bridge across the chasm has not yet been built.

This is, of course, true of every aspect of business, not only HR. Consider the transformation of functions such as sales by the introduction of Customer Relationship Management (CRM) systems, marketing by marketing automation systems and finance by advanced analytics. Yet HR has not yet even re-imagined, let alone reinvented, itself to adapt to this new environment.

A harsh observation, not a judgment.

Evidence comes from survey after survey, be it a cohort of CEOs, business leaders in general, or HR executives themselves. It appears everyone grasps the problem. In its July-August 2015 edition, Harvard Business Review led with a controversial cover story: *It’s time to blow up HR and build something new*. Since then, industry observers have repeatedly thrown down the gauntlet to HR: countless blog posts bemoan the state of HR and Deloitte concludes that HR requires an *extreme makeover*.⁴¹

There is a lot of noise. And to stay with the clichés momentarily, where there is smoke there must be fire. If HR accepts that its own transformation is as inevitable as that which is occurring in the broader business world, then it rightly becomes a matter of developing appropriate strategies and executing them.

The world of work is changing; new permutations of workplace practices, modes of work, employer and employee expectations are evolving. With their industrial-age origins, many present-day HR policies and processes are poorly aligned with the needs of business and the workforce of the future. Emerging models highlight the need, for example, to shift from a focus on talent management, which largely develops practices around the needs and expectations of a permanent workforce, to *talent portfolio management*, which integrates contingent workers, to truly align the capabilities and development of the workforce in an agile business environment.⁴²

There are many shifts already in play and many more on the horizon. To be fair, most HR teams are acutely aware of the urgent need for more progressive thinking and approaches. Rather than expecting to have all the right answers, we believe that organizations and their HR functions need to begin asking better questions. From our research, we suggest the following questions should be asked by the key stakeholders of HR.

The top 5 questions

*Top 5 questions the **C-suite** should be asking:*

1. How can our organization apply its human capital to innovate and compete effectively?
2. How should we align our investment (financial and operational) in human capital to match our expectations of its contribution to business performance?
3. How are we measuring and managing human capital risk?
4. What jobs/tasks should we be creating, automating or outsourcing in the next 3-5 years?
5. What is the business impact of our HR function?

*Top 5 questions the **CHRO** should be asking:*

1. Do we have a workforce strategy that aligns our human capital with our business needs over the next 3, 5 and 10 year periods?
2. How do we re-skill and re-educate our workforce to benefit from new technologies and approaches?
3. What human resources technology investments do we need to make to give us predictive foresight and workforce decision-making capabilities?
4. If we eliminated all existing HR policies and practices we have today and reinvented HR, what should it look like?
5. Does our HR team have the digital, cultural and business intelligence it needs to prepare us for the future?

*Top 5 questions an **HR professional** should be asking:*

1. Can I explain our organization's business model: our key markets, products and services, how we generate income, our competitive strengths, our customers and why we exist?
2. How can I rewrite my job description to focus on output and business impact?
3. What are the most important skills I need to develop in the next 1-3 years?
4. How much time will I spend working in the business this year?
5. Given the future demands on HR, am I in the right job?

The great migration

Disruption is unsettling.

The future, by definition, is full of unknowns.

Our present actions are both disrupting and creating this future.

When our grandchildren and great grandchildren look back on this time, they will likely view it as a period of profound transition. The last remaining legacies of the industrial era will be a thing of the past and much of the future we presently envisage will be an integrated part of daily life. It took several decades for the full impact of the industrial revolution to gain traction: for new factories to be built, new machines to be deployed and new industries and markets established.

We are only at the beginning of the journey into the digital era. In three decades' time, what we now see as disruption will just be the norm.

Artificial intelligence will by then be so pervasive as to be unnoticeable.

We won't give a second thought to working alongside robots. And we will expect unlimited instant access to just about everything.

The challenge for HR is guiding the great migration of the labor force into this new era, a migration HR is itself a part of. To achieve this, HR professionals will need a level of vision, courage and fortitude beyond what has been expected or demonstrated in the past.

On the precipice, the vista is amazing. Drawing a deep breath and scanning the full purview of the emerging environment, exciting possibilities are unveiled and new pathways forged. The time has arrived for HR to be the change it advocates.

If not now – when?

The Essential HR Strategy

Brian Sommer

President, Vital Analysis

Brian is a leading HR technology industry analyst and the Founder of TechVentive, an MBA university professor and winner of the Software Advice's 2011 Authority Award - ERP Expert and frequent ERP Writer's Award winner.



If nothing ever changes, then your old methods, people and technologies will do just fine. But, the world is anything but static. Competitors, technologies, regulations and more are constantly in flux. Your HR organization must change, continuously, if it is to remain relevant. The amount of change, of late, is so great, that mere incremental change is insufficient. HR organizations today need a bigger change and the key tool for this is a new strategy.

"The first step in creating a great HR strategy is to make an honest assessment of where current HR capabilities, processes, systems and people are today."

But what kind of strategy is needed depends on an organization's starting point. If your HR environment is highly dysfunctional, it must get functional first. Functioning HR groups need to become top quartile performers. Those HR groups that are already highly efficient need to develop capabilities that create material competitive advantage for their firm. And, the best of those are looking at redefining not just HR but the competitive landscape of an entire industry.

The first step in creating a great HR strategy is to make an honest assessment of where current HR capabilities, processes, systems and people are today. And, while knowing the starting place is a key input to strategy development, great HR leaders only plan for one major step change at a time. Going from dysfunctional to functional is very possible but to go from dysfunctional to an industry game changer could be a pipe dream. Strategies should contain manageable steps.

A strategy is a plan that addresses specific business needs and wants. What should the HR plan today contain? At a minimum, it must address these matters:

- How HR will radically refocus its own talent from transaction processing to becoming high-value contributors
- How HR will transfer many HR tasks to employees, contingent workers, job-seekers, etc.
- How HR will create a powerful and winning employment brand

- How HR will adopt processes, technologies and innovations of other functions, such as marketing
- How HR will develop powerful, relevant future leaders for the firm
- How HR will develop deep networks of potential employees
- How HR will harness big data to better identify future employees, detect fraud and augment decision-making
- How HR will utilize analytics to improve hiring, engagement and productivity
- How HR will look at the combination of mobile, social and cloud technologies to drive new capabilities and derive competitive advantage
- Where HR will find new value drivers beyond simple efficiency and effectiveness gains

For many HR groups, developing such a strategy will be a difficult task. As a rule, many HR leaders are not as cosmopolitan - aware of new technologies and approaches - as they should be. They may lack the time to discover new technologies, or work in a geography where few HR trade shows, HR professional associations and industry networks are convened. No matter the reason, HR professionals must avail themselves of every potential resource on the Internet to become the most informed HR executives possible. Without up-to-date knowledge, a strategy is simply out-of-date, incorrect or irrelevant.

"HR plans must deliver real business benefits at the right time and with the right price point."

Development of the strategy may require a concurrent business case development effort. HR executives must create plans that can be bought into by other corporate executives. HR plans must deliver real business benefits at the right time and the right price point. But, if these plans aren't aligned with other corporate strategies - for example, the ability to drive 10% annual organic growth as well as rapid integration of key acquisitions - then the misaligned strategy will fail.

The new strategies will likely contain plans that include:

- **How the mix of HR team members will change from containing many generalists and administrators to having data scientists, statisticians, marketers, etc.**

These new team members will drive the correct and best uptake of new analytics, algorithms and big datasets so that HR can better reduce attrition, develop rich pipelines of talent and produce workforce forecasts.

- **How HR will take time out of every HR process**

No more will HR find it acceptable to see long elapsed timeframes in recruiting talent, in making employment decisions, in providing employee performance feedback, etc. Time is now the enemy of HR and must be dealt with aggressively if firms are to get and retain the best people for their company.

- **How HR will modernize the technology it uses**

HR cannot continue with the patchwork collection of technologies that it has assembled over the last several decades. These systems may include a mix of cloud and on-premises solutions along with a generous pile of spreadsheets, custom – or worse, manual – integrations, and some custom code. IT may be behind in applying new upgrades to the on-premises solutions and accumulating a growing technical debt load that must be cleared. Whatever the issues, this largely out-dated and kludgy mess of systems must go if HR is to operate with the accuracy, speed and maximum efficiency that the organization requires.

- **How HR will take self-service to all new heights**

Today, there are more smart mobile devices on the Earth than people. HR needs to move as many of its transactional activities as possible to self-service and mobile enabled solutions. Powering these capabilities will require new process management, exception management, onboarding, offboarding, archival and other capabilities that supplement or are embedded within newer generation HR solutions and processes.

- **How HR will win the (never ending) war for talent**

Radically different processes and technologies may be needed if HR is to attract and retain the talent the firm needs now and in the future. A comprehensive strategy might show the need for a marketing approach to recruiting and the use of big data resources to identify potential hires. New technology could also help the firm retain the best and brightest employees.

- **How HR will develop the workforce and leadership pipeline it needs**

The days of expecting to find qualified talent in the open market for every position may be over. Developing your own talent may be an old-fashioned idea that is coming back into favor. Why? The changing demographics of workforces coupled with rapid job obsolescence means a very proactive approach to talent planning and development may be a business necessity. The question is how HR will deliver this?

- **What kinds of external data, benchmarks and big data will the new HR need**

HR can no longer be satisfied with the data that is contained within their ERP and HR systems. Massive external data stores are being used by job seekers such as LinkedIn, Glassdoor and many others. Weather information is being used to schedule retail workers. Even if this data is identified, what technologies will HR need to use this information to its full advantage?

- **How HR will make its firm a destination employer**

Can HR create outstanding recruiting processes, compelling recruiting and onboarding experiences to make their organization the go-to destination for new hires?

- **How HR will reduce its dependency on internal IT**

Can HR acquire different technology, such as multi-tenant cloud software that reduces its dependency on internal IT and eliminates IT technical debt?

- **Whether HR can/should bring certain outsourced processes back in-house**

Should HR consider bringing some functions back in-house, especially those that can be done via more efficient cloud or machine learning-based systems?

- **How bots, robotic process automation and machine learning will affect the organization's workforce**

What will the workforce look like over the next several years especially if large numbers of people will be replaced or supplemented via robotic process automation, algorithms and machine learning?

The strategy of HR, more important than ever, will also become one of the most dynamic exercises HR leaders must complete. Its content and its importance to the organization has never been greater.

Are you up for the challenge and the changes it will require?

Rapid Change Calls for Rapid Experimentation

Patrick Sharry

Director, People and Decisions

Patrick has extensive private and public sector strategic management and consulting experience and is on the adjunct faculty of the Australian Graduate School of Management.



The next decade will be one of enormous change – and we have no way of knowing what that change will be like. On the surface, a lot of those changes will be driven by technology. Moore's Law drives the exponentially increasing speed of computation and the shrinking of components. Digitization drives instant delivery (e.g. money transfers) and zero marginal cost (e.g. music). Global connectivity drives instant sharing of information and the creativity that comes from that sharing.

These changes will have a huge impact on our workplaces – and it won't just be that we have a faster computer on our desk.

One of the big impacts will be in automation. Increasing computational speed will mean that robots can do more and more sophisticated tasks. And they can be trained more easily to do them. Natural language processing will mean that, where necessary, those robots can interact with humans through speech. Manufacturing jobs will be significantly impacted, with many of those jobs disappearing. However, it is not just manufacturing. Driverless cars, drone deliveries and robotic sales assistants will be just a few of the myriad other manifestations.

Of course, it is not just in the robotization of mechanical tasks (although this in itself will have a huge impact) but in the automation of professional work, that we will see profound change. We are already seeing the application of algorithms to recruiting. Intelligent systems manage applications for a position to identify the most suitable candidates. What happens when we have algorithms of algorithms – systems that are mining or managing the other systems to link roles and candidates without the candidate ever formally applying? And then analyzing the most suitable candidate's social media profile to find the best way to convince them to take the role?

In other professional areas such as law, automated systems are also having an impact. Much of the drudge-work on which junior lawyers

have honed their skills is being replaced by smart systems; repetitive tasks such as conveyancing are being automated; experiments are well underway to develop machine-to-machine negotiation of contracts. While all of these things will make life simpler for young lawyers, how will they learn the skills of their profession without all that time spent on those basic tasks? Or is it more the case that the profession will need to change to incorporate those systems into their way of working?

Success in the future is likely to come from being able to work effectively with the system (not against it). And when those systems are able to work autonomously (e.g. machine-to-machine contract negotiation), will it only be lawyers who are able to use them? In the medical field, "Dr Google" is very popular. Once we have remote diagnostic devices linked to smart systems through our phones, the practice of medicine will need to change radically. Accountants, actuaries and architects are all facing similar change.

Developments such as these will change work and workplaces. It is the social implications that will have the greatest impact. Unless we move forward thoughtfully, we are at risk of driving an ever widening, and ever more dangerous, divide between those who have the skills to work in this new world and those who do not.

Political systems in the Western world are currently straining under pressure from those who are coming off second best from changes brought about by technology. Organizations will need to weigh up the trade-off between the potential for ever-increasing efficiency and the risks of a fractured society.

For leaders, success will mean navigating through a complex and rapidly changing environment. It is not only a case of "what got us to here, won't get us to there", but "what worked last week, won't work this week". In a complex system, the workings of the system are not obvious. Making sense of what is happening is a constant challenge made worse when the pace of change is rapid – and accelerating!

Nicolas Taleb, most famous for his introduction of "black swan events" into our everyday business conversations, also wrote a book called *Anti-Fragile*. In this lesser known volume, he explains that the opposite of "fragile" is not "robust", it is "anti-fragile". Robust systems respond to change by trying to be strong enough to resist the force. Anti-fragile systems have the flexibility and agility to be stronger as a result of interacting with the forces of change. The beachside palm tree is a good example. If we are to succeed in our rapidly changing world, we should aim not to be robust, but to be anti-fragile.

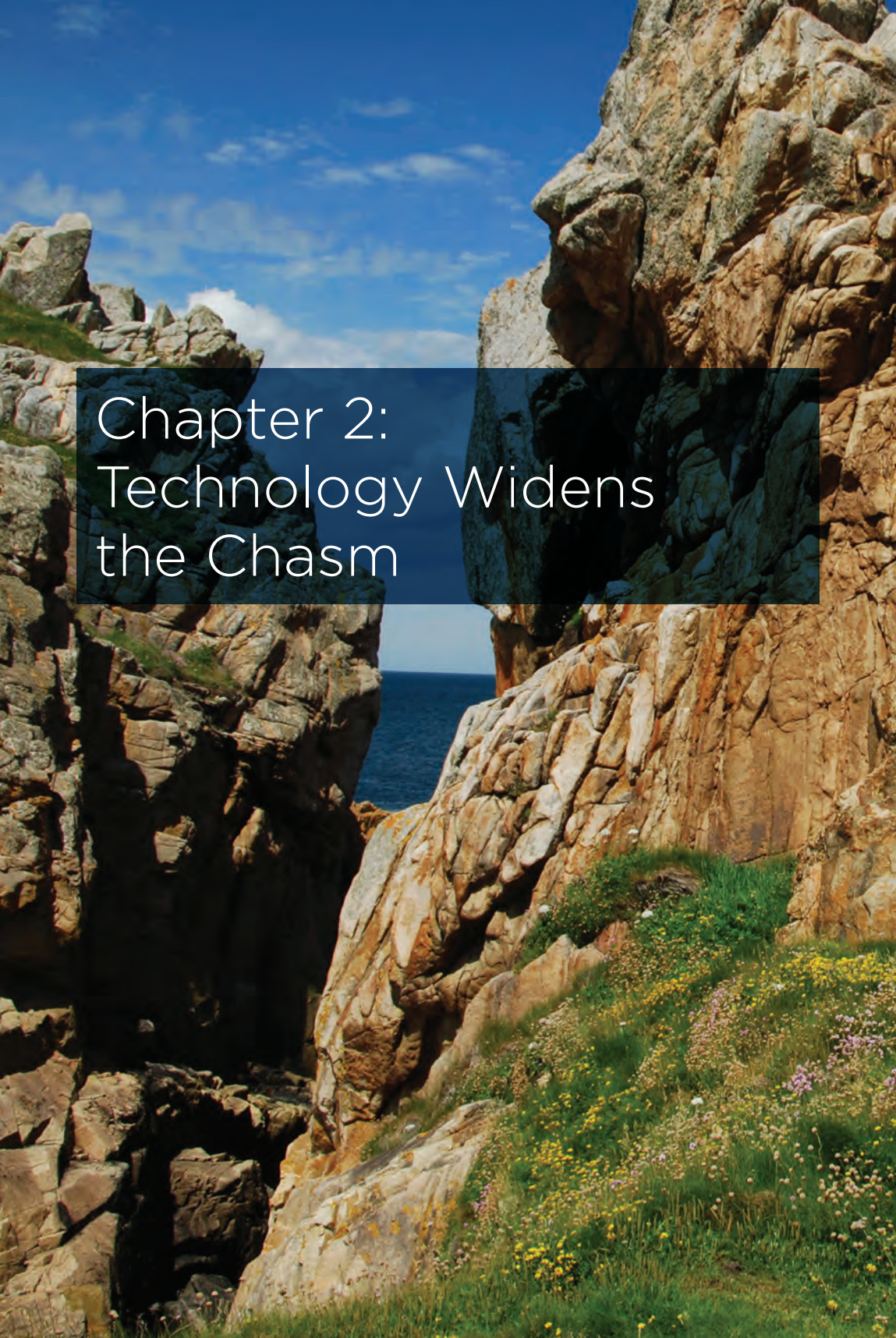
To be anti-fragile, we will need to be much more open to experimentation. From evolutionary biology, we know that the species that survive are the ones who are best able to adapt. How do they adapt? They are always experimenting – small mutations in their genetic makeup test small changes to their looks, their internal systems and their interactions with their environment. Some of these adaptations are successful and some aren't. The successful ones are retained – and the experimentation continues. It is this constant experimentation that drives survival. We need to think the same way in our organizations. To deal successfully with rapid change, we need rapid experimentation.

We will also need to be much better at listening to what people on the front line are telling us. One of the keys to leading in complex environments is to listen to different perspectives. To do this well, we will often need to suspend our previous assumptions about what works and be open to new ways of making sense of what is happening.

Both experimentation and listening require a perpetual curiosity and willingness to learn. The organizations – and the leaders – who will thrive will be the ones who learn most effectively.

Given the social changes that technology is driving, leaders would also be wise to remain connected to the social purpose that their organization fulfills. Successful organizations will be able to create value for themselves by creating value for the communities in which they operate.

In Chinese, there is a phrase “wei ji” which is often translated as “crisis”. It is the conjunction of two ideas: danger and opportunity. It is a useful phrase for these times. Wherever there is opportunity there is danger, and wherever there is danger there is opportunity. Wise leaders will remember this, tread carefully and always be optimistic about finding the next opportunity as this complex future unfolds.

The background image is a full-page photograph of a rugged coastline. It features steep, layered rock cliffs in shades of tan and brown. A narrow gap between the cliffs reveals a deep blue sea under a bright blue sky with scattered white clouds. The foreground on the right is a grassy slope covered with numerous small yellow and purple wildflowers.

Chapter 2: Technology Widens the Chasm

In Brief

- The perfect storm of online platforms, devices and applications has arrived and its potential is unlimited. Cloud hosting is becoming the norm and concerns about security and privacy are the challenges of this time.
- The future is in mobile: smart devices proliferate and are more than an optional accessory – they are the communication channel of choice, including wearables, which will soon become mainstream and replace their handheld ancestors.
- Social media struck a communication nerve that has secured its place as an embedded part of global human interaction – for better and for worse. Social enterprise applications will break down barriers to global collaboration and innovation.
- The ‘fiction’ is disappearing from science fiction. We are on the cusp of accessing once unimaginable technologies.
- Human and technology symbiosis is underway: artificial intelligence, machine learning, robotics, social sensing, augmented and virtual reality will soon all be part of daily life and work.
- Jobs are disappearing and jobs are being created: the question is about retraining in the short term and the overall balance between human and automated jobs in the long term.
- HR needs to take a lead role in the digital transformation of the organization by promoting a digital culture, championing digital intelligence, mastering HR analytics and mobilizing virtual talent.
- Talent Lab 1 findings:
 - Technology and demographics accelerate the reshaping of jobs and work
 - A new workforce calls for a new workforce plan
 - Consumer technologies reset the bar
 - HR lags in the uptake of technology
 - Future scenarios for HR include evolution, metamorphosis and extinction

The Perfect Digital Storm

What do you get when you combine exponential advances in software development with a proliferation of smart mobile devices and miniature sensors, on a platform that connects seven billion people worldwide in an online community?

Unprecedented possibilities.
Unleashed creativity.
Unexpected opportunities and challenges.

The foundational elements of the Internet are now in place: the cloud in which it is hosted, the mobile hardware that opens the windows of access to it, and the social networking applications that facilitate communication.

Getting the network ready

Today, when we think about innovation, we mostly think digital. Whether it is a new device, app or business process, we are rapidly digitizing our world.

Governments everywhere are challenged to develop their national infrastructure to carry the exponential data load as consumers and businesses turn to high-tech solutions for just about everything. Each year, the World Economic Forum (WEF) assesses the technological progress of 143 countries, evaluating their digital readiness (infrastructure, affordability, skills) and usage (consumer, business, government) to derive the Network Readiness Index (NRI).⁴³

Top 20
Network Readiness Index 2016

Rank	Country/Economy	Value	2015 rank (out of 143)
1	Singapore	6.0	1
2	Finland	6.0	2
3	Sweden	5.8	3
4	Norway	5.8	5
5	United States	5.8	7
6	Netherlands	5.8	4
7	Switzerland	5.8	6
8	United Kingdom	5.7	8
9	Luxemburg	5.7	9
10	Japan	5.6	10
11	Denmark	5.6	15
12	Hong Kong SAR	5.6	14
13	Korea, Rep.	5.6	12
14	Canada	5.6	11
15	Germany	5.6	13
16	Iceland	5.5	19
17	New Zealand	5.5	17
18	Australia	5.5	16
19	Chinese Taipei	5.5	18
20	Austria	5.4	20

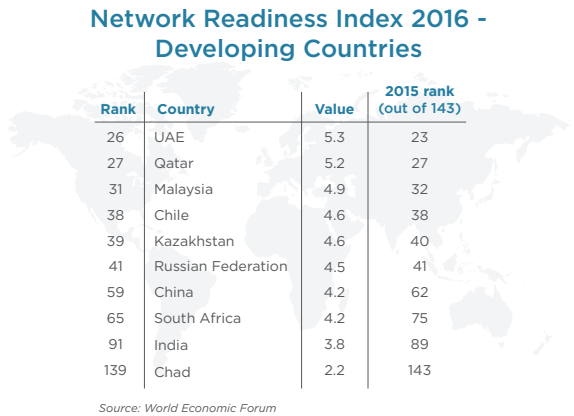
Source: World Economic Forum

The higher the NRI ranking, the greater the capacity and capability of each nation to leverage digital technology for economic and social gain and increase its international competitiveness and the well-being of its citizens.

First prize goes to Singapore (again), which trumps the index overall, but also on the sub-indices of digital environment (political and regulatory, business and innovation), usage (consumer, business, government) and impact (economic and social).

Seven of the top 10 rankings go to European countries, with a noticeable Nordic skew. The advanced western economies of the U.S., the U.K., Canada, Australia and New Zealand perform consistently and in the east, Hong Kong, Korea Rep. and Taipei are unsurprising inclusions.

But the developing world is making leapfrog progress. The Arab nations of the UAE and Qatar are just outside the top 20; Southeast Asia leads with Malaysia; South American progress is divergent, but Chile makes the top 50; the Eurasian region is led by Kazakhstan; Russia holds its place at 41 and both China and South Africa have improved their rankings. India has significant work to do, notably in improving the network usage of its billion+ population and Sub-Saharan African countries are among the trailers, Chad receiving the lowest ranking.



Among the key findings of the WEF is that the digital revolution goes deeper than just changing how we interface with technology – it changes the underlying processes and business models behind the technology. For example, taxi, hotel and food catering business models have been overhauled by technology platforms that simply use available Internet capabilities – the innovation pertains not to any new product or service, just the revamping of a closed or inefficient delivery channel.

The cloud comes of age

“The debate about the cloud is over. The cloud is an absolute, unquestioned reality.”

Kirill Tatarinov
President & CEO, Citrix

The origins of the Internet date back to the 1960’s although the world wide web, the form in which we know and use it, emerged in 1993. Today, this thirty-something year-old network is hosted on servers located around the globe and holds zettabytes of personal, institutional and government data.

The Internet growth rate is staggering. In 2013 it carried a 4.4 zettabyte data load (1 zettabyte = 44 trillion gigabytes). In 2016, we were adding approximately 2.5 exabytes (1 exabyte = 1 billion gigabytes) to this load each day, and forecasts anticipate the Internet to hold 44 zettabytes of data by 2020.⁴⁴

Computers are brilliant at data processing on a phenomenal scale, but what really brings computers to ‘life’ is the Internet. And the cloud provides computing service accessibility via the Internet.

The cloud is challenging some very entrenched views:

- Ownership**
The benefits of access are increasingly outweighing the need for ownership. Whether it be games, music, movies or books, we can be educated or entertained faster and cheaper online, without the associated costs of storing and maintaining the physical merchandise. What’s more, future technology innovations will be increasingly delivered via the cloud.

In enterprises, cloud-hosted solutions have moved beyond the phase of early adoption and, in many organizations, are now a mainstream component of the technology suite. In 2015, HR systems purchases reached a tipping point: 50% were hosted in the cloud.⁴⁵ CIOs around the world have focused on balancing and mitigating the risks associated with cloud hosting in favor of the undeniable cost, performance and innovation benefits to be gained by IaaS (infrastructure-as-a-service), PaaS (platform-as-a-service) and SaaS (software-as-a-service). Enterprise cloud computing has moved well beyond the early hype and is delivering on the promise of productivity.⁴⁶
- Security**
Data security is an issue wherever that data is stored, be it in-house or online. While concerns about security breaches have frequently been levelled at cloud-based SaaS platforms, in reality, few significant cloud service failures have actually occurred and in-house systems are certainly not immune. That said, concerns about the security capabilities

of cloud service providers and a lack of visibility over who is accessing data remain the primary detractors for enterprises considering the shift to cloud.

Proactive risk management is, of course, critical. By the end of 2018, half of organizations with more than 5,000 users are expected to have deployed cloud access security brokers (CASB) to enforce security policies such as authentication, single sign-on, encryption, device profiling and malware detection. Cloud security and compliance is forecast to represent 75% of the time and resources put toward Internet security by 2020.⁴⁷

• Privacy

The misuse of private information and intellectual property has long been an issue for individuals and organizations – one that has been amplified and exacerbated by the Internet. At an individual level, opinions and sensitivity about online privacy vary significantly – from near ambivalence to outright paranoia. An emotional topic for many, protecting our privacy requires that we individually resolve whether the cost of losing some or much of it is outweighed by the benefits gained through being online.

For organizations, the privacy challenge can have significant business implications. Extensive information sharing and online collaboration are increasingly the norm and stifling these interchanges can potentially restrict innovation and have cultural implications. A managed balance needs to be reached. Jurisdictional differences in privacy laws, especially between the U.S. and European nations adds complexity and there is a growing trend toward the integration of advanced privacy features such as granular personal preference management, dual control access and country based segregation of data.⁴⁸

While the ownership challenge requires a shift in mindset from possession to shared access, effective management of security and privacy will become even more important in the future.

All said, the cloud, even with its associated challenges, is now an embedded and vital part of our digital world. Only via the cloud can vast amounts of information and exchange occur in a decentralized network, providing unlimited and instant access to knowledge and expertise, democratized to be available to everyone, everywhere.

As Gartner analysts state: *“Cloud ecosystems are not optional but foundational, and new value networks are not only possible, but also essential to win a competitive edge.”*⁴⁹

Mobile mania

*“An iPod, a phone, an Internet mobile communicator – these are not three separate devices! And we are calling it iPhone. Today, Apple is going to reinvent the phone. And here it is.”*⁵⁰

Steve Jobs (late)
CEO, Apple Inc.

It's hard to believe that 2017 marks just the first decade anniversary of Steve Jobs' awe-inspiring launch of the first model Apple iPhone on January 9, 2007. Eighteen months later, the first Android smartphone was released. In the ten years since, we have accumulated over 2.6 billion Internet-connected smartphones, representing approximately half of all mobile phones in circulation.

In the developing world, there are more households with mobile phones than those that can access clean water and electricity: 70% of the poorest people in developing countries own a mobile phone.⁵¹ It seems that even basic hygiene and household essentials are trumped by our need to communicate and connect with others. Mobile devices are making that possible, just about anywhere on earth.

Moreover, the variety of mobile devices is also increasing. Apple's iPad, launched in 2010, was the first touch-screen tablet to market. In its first year, 19 million iPads were sold: six years later there are over 300 million. Combining all tablet vendors, there were approximately 1.15 billion devices in circulation in 2016, forecast to grow to 1.46 billion by 2020.

The miniaturization of technology, improved battery life and broad availability of wireless networks create the perfect conditions for wearable devices such as smart watches, smart glasses, fitness trackers, smart jewellery and smart fashion. Wearables have gained traction since 2014, with sales of these products forecast to tip US\$19 billion by 2018.⁵² Wearables have great potential to improve our quality of life:

- in sports and fitness, wearables produce self-quantified analytics that enable individuals to track their activities against goals, benchmark themselves, collaborate and compete with others, and receive feedback and recommendations
- in healthcare, wearables can monitor patients, collect and transmit health data to medical professionals, alert patients to manage their condition, and trigger emergency intervention.

Work applications of wearable devices are imminent, albeit in their early stages. Wearables can be used to promote and monitor employee wellness programs through activity monitoring; increase teamwork by tracking where and with whom employees collaborate; and ultimately positively impact productivity.⁵³

Gartner predicts that “by 2025, wearables and smart machines will have driven a change in IT strategy analogous to the introduction of ‘bring your own device’ on enterprise mobility policies and procedures.”⁵⁴ Employee adoption of such personal surveillance technologies will hinge on the associated benefits they can derive from them, such as flexibility, autonomy and interaction. HR has an important role to play here.

For many organizations, mobile technology is a double-edged sword. On the one hand, allowing employees to BYOD (bring your own device) provides a cost-effective way to encourage real time communication and collaboration, and increases engagement; on the other, it reduces control and exposes the organization to potential privacy and security compromises.

Notwithstanding, mobile adoption is pervasive and growing, so IT and HR functions need risk management strategies that protect employees and the organization without curtailing the significant benefits mobile unleashes.

The trend is clear: consumers and workers of the future expect online connectivity whenever they want, wherever they are, via ultra-light, ultra-powerful devices that are more and more integrated with their lifestyle. The future is on-demand and mobile.

So social

“With workers who increasingly expect to have their voices heard, and with tools to enable that, it is now possible – perhaps even paramount – to build more conversational firms.”⁵⁵

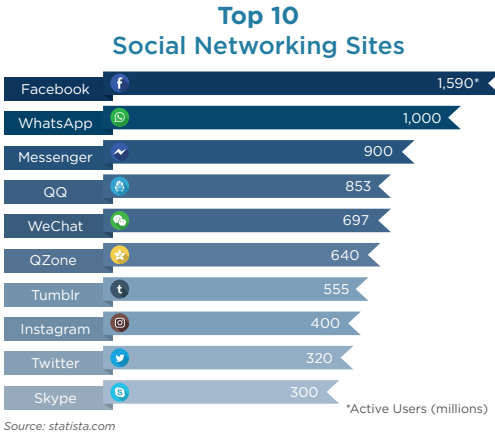
Prof. Catherine J. Turco
Author: The Conversational Firm

Life before social media – how did that work again?

This omnipresent feature of our digital world – social media – turns 20 in 2017. The earliest social networks, such as Classmates.com and Sixdegrees.com date back to around 1997, although it took another five years before momentum really took hold with the launch of Friendster in 2002 and MySpace and LinkedIn in 2003. One year later in 2004, Facebook (then theFacebook) was launched, and well, the rest is history.

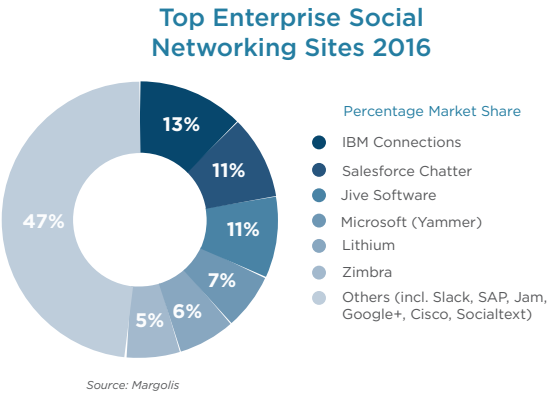
If social media were an infectious disease, it would have hit pandemic proportions some time ago. There are nearly 2.4 billion social network users today, representing every nation and one in three people on the planet. No human-to-human exchange has been more contagious, spread faster and further nor gained greater momentum than a social media topic that has gone viral.

Consumer social networking is still dominated by Facebook, which remains well ahead of the pack in the number of active users around the world (and most other measures) and locked in a personal net worth for Chairman & CEO Mark Zuckerberg of US\$44.6 billion in 2016.



Enterprise social networking has seen similar explosive growth. Ten years ago, only 10% of organizations were actively using enterprise social networks. In 2017 adoption rates are set to peak at 70%. Impressive performance statistics accompany this growth: on average, increased revenue growth of 10%, improved productivity of 15% and a 31% increase in the speed of innovation, due to better communication, collaboration and problem solving capabilities.⁵⁶

A McKinsey & Company study found that imitation and innovation have been the key drivers behind this growth: 35% of companies jumped on the enterprise social networking bandwagon because their competitors were on it and the most popular features are blogs, social networking and video sharing.⁵⁷



Numerous players inhabit the enterprise social networking space, although no market dominating platform has yet emerged. That may change with the uptake of recently launched Workplace by Facebook, which demonstrated adoption and usage rates as high as 90% during closed beta testing in 2015-16.

As the workplace is reinvented to become less structured, more interactive, diverse and engaging, communication networks and channels will become the critical infrastructure that underpins fast information flows and accelerates innovation.

There's more to it though, than active chats and information sharing. Enterprise social networks are evolving to integrate people and relationships with the organizational information they need to get things done. By combining the capabilities of social networks with corporate intranets that house knowledge portals and other static information repositories, more dynamic and engaging tools are emerging to facilitate employee connections and work productivity. These interactive intranets allow for corporate and employee generated content, two-way communication, personalized access, intuitive navigation and insightful analytics.⁵⁸

Led by their consumer online experiences and the consequent rise in their digital dexterity, employees now view their enterprise social networks so intrinsic to internal communication and collaboration that analysts suggest employee engagement will be a shared performance objective for both HR and IT departments by 2020.⁵⁹

On the cusp: emerging technologies

*"By 2025, every industry will be transformed by digital business. In leading organizations, the digital business strategy **is** the business strategy."*⁶⁰

Gartner

By the end of this decade, it is expected that more than 30 billion devices around the world will be aggregating and interpreting the data sourced from microsensors built into everything from cars and refrigerators to cows and people. In its review of the current top emerging technologies, the World Economic Forum points to the proliferation of the Internet of Nano Things (IoNT), powered by online nanosensors, that will turn scenarios such as a home unlocking itself as it recognizes its owner or a heart implant making an emergency call as it detects signs of heart failure, into everyday occurrences.

Add to this the replacement of chemical and lithium batteries with the next generation of safer, more powerful and affordable sodium, aluminum or zinc batteries; advanced perovskite solar cells that will overcome the limitations of the current silicon products; blockchain ledger technology enabling

secure transparent commercial transactions on a global open platform; autonomous vehicles of every shape and size; and leapfrog advances in artificial intelligence – and we can continue to expect transformational improvements to almost everything we do.

On the horizon and in active development are innumerable next-generation technologies that seem almost unbelievable today:

- 4D printers (even as 3D printing is still in its infancy) that use materials capable of dynamic transformation – changing form – *after* they have been printed, via electrical or chemical triggers
- three-dimensional volumetric displays of objects and people that create lifelike representations with which to interact
- neuromorphic devices that exponentially expand processing velocity by using neural network algorithms applied to big data to accelerate and enhance what people can think and do.

Wearable and ingestible biometric sensors will selectively use and generate big data to tailor, augment and channel our experiences – at work and at home. At the Institute for the Future, scenarios depicting the possibilities to reshape human experience through machine symbiosis are being explored.⁶¹

In your lifetime, you will almost certainly witness or possibly experience:

- footwear with GPS readers that guide you to a new location for a meeting at a prospective client's office
- driverless cars fitted with mood detecting sensors that recognize you're feeling stressed and release calming scents and piped music to soothe you
- eye glasses that instantly identify anyone in your focus, together with their social networks and provide continuous feedback on how to make your interaction more effective
- ingestible digital pills that enter and remain in your bloodstream, seeking out pathogens and providing biofeedback on your immune system
- headbands that can read your alpha and beta brainwaves and translate your thoughts into actions or enhance your dreams
- prosthetic memory implants that boost knowledge retention or overcome damage caused by brain trauma or aging.

Remarkably, we are steadily taking the fiction out of science-fiction. The great convergence of science and technology is here and we are only beginning to imagine what it will mean.

Human + Technology Symbiosis

It's not hard to be in awe of the advances being made almost daily in computer technology. Greater wonderment yet awaits as we begin to translate these advances into applications that touch and augment our personal and professional lives.

The speed, scale and significance of advances in all fields of science and technology are both breathtaking and mind-boggling. They are also progressively intertwining with our daily experiences with such subtle ubiquity that they are quickly taken for granted and fused with our expectations of what is normal.

Artificial intelligence everywhere

"We are marching inexorably toward firmly connecting all humans and all machines into a global matrix."⁶²

Kevin Kelly
Author: The Inevitable

Will computers be capable of replicating and exceeding human intelligence? Not yet, but they're working on it. It depends on which of the 'intelligences' we are referring to. Computers already have the brawn, and are fast acquiring the brains, to compete with us.

For decades, machines have been put to work to support humans in physically demanding (or impossible) tasks. Now the heavy lifting is in the cognitive arena, where the mastery of mathematical and rule-based tasks and programs has spawned the next wave of computer intelligence. Dubbed *artificial intelligence* back in the 1950s, it refers to intelligence held by inanimate objects, and has the effect of sparking both fascination and revulsion in its human creators.

Artificial intelligence (AI) is very, very clever. Today's AI aims to replicate the structure of the brain itself, using the concept of neural networks to form vast webs of interconnected pathways, capable not only of immense and complex processing, but also of adaptive learning.

Learning. This sets AI apart from all the mechanization and computerization we have seen to date, because AI technology does not just blindly run a programmed code – it adapts and changes it, improves and refines it, continuously.

More and more, this means that our machine colleagues will become autonomous – not mere servants processing allocated tasks, but informed partners that augment what we do, bring their strengths to our weaknesses and yield a superior outcome as a result. You can rely on your AI friend

to crunch and evaluate reams of data and help you draw conclusions; its algorithms will make decisions based on your criteria; and it will recognize patterns and be able to help predict possible scenarios. There is a limit. Machines today are not smart enough to be self-aware and be able to truly think for themselves. Yet.⁶³

In the workplace, LinkedIn CEO Reid Hoffman flags the ability of organizations soon to be using AI technology to create organizational knowledge graphs, akin to Facebook social graphs that allow users to map their friends and connections based on criteria of their choosing, such as location, education or occupation. *"Specialized AIs will be ubiquitous throughout the organization, indexing every document, folder, and file."*⁶⁴

Can you envision your entire organization presented on knowledge maps, not only by demographics, mobility, skills and interests but also by mood, project contributions and risk?

Machines learn fast

"Quiz show contestant" may be the first job made redundant by Watson, but I'm sure it won't be the last."⁶⁵

Ken Jennings
Jeopardy! Quiz Champion

Machine learning doesn't just raise the bar; it changes the game. Consider an example in which software algorithms applied to work in property conveyancing, bookkeeping or customer support break down these jobs into tasks, then either automate the completion of those tasks or outsource them to the on-demand work community for completion. As freelancers return the completed work, the software learns from them, incorporates the new information into its own algorithms, allowing programs to automate even more of the tasks next time around, reducing or eliminating even the need for outsourced workers. These sponge-learning machines become increasingly intelligent.

Take IBM's Watson. In February 2011, over a series of matches, Watson beat Jeopardy! quiz masters Ken Jennings and Brad Rutter at the game that had brought them fame and some considerable fortune. Magnanimous in defeat, Jennings made his ominous prediction about the future of work; he correctly forecast that humans would soon be supplanted in many of the world's current jobs – their successors, machines.

Watson, named after IBM's first CEO Thomas J. Watson, is a hot celebrity in the machine-learning world. Watson's competitive advantage over its computer counterparts is its ability to analyze and interpret unstructured data, such as the news you read, the images, messages, blogs and tweets you post, research studies, reports, scientific literature and so on – which combined, represent the vast majority of all data on the Internet today.

Unlike the computers most of us use, which rely on rule-based code and logical structures to do their ‘thinking’ for them, Watson, having collated core knowledge and been ‘trained’ to understand broad patterns, natural language and protocols that enable it to think for itself, can adapt outputs based on new inputs and synthesize enormous volumes of unstructured data.

This makes Watson and computers like it, the ultimate ‘cognitive assistant’. For example, now the repository of the world’s best clinical research and applied medicine, Watson is arguably the fastest and most accurate diagnostician of human medical conditions, ranging from chronic diseases to multiple forms of cancer. Using Watson’s capabilities, a doctor in Rwanda can access the best medical expertise on earth to tailor a treatment for a patient in his care. That doctor’s professional expertise and experience are augmented by software that fuses the knowledge of surgeons, specialists and scientists from around the world, understands the local conditions and charts a course of action that optimizes the prognosis for the patient.

What can Watson learn about your job?

How could a computerized cognitive assistant transform where you focus your daily efforts?

Could it transform your overall performance and productivity?

There’s a bot for that

“You can make the case that the core function of management has gone from managing the business, to managing the bots that are managing the business.”⁶⁶

Tim O’Reilly
Founder and CEO, O’Reilly Media

Flashback. Perhaps you remember Colonel Steve Austin, NASA astronaut, the Six Million Dollar Man? In the mid 1970s this popular fiction television series, starring Lee Majors and based on Martin Caidin’s novel, Cyborg, enthralled audiences with Austin’s superhuman powers. Suffering severe injuries following the crash of an experimental aircraft he piloted, Austin’s shattered body was rebuilt with the aid of bionic body parts: a bionic eye with a 20-times zoom lens and infrared night vision, bionic legs that allowed him to run at more than 60 miles per hour, and a bionic right arm that gave him the strength of a bulldozer. All of which he put to work each week to save the world from evil.

The fascination with Steve Austin, apart from Lee Majors’ rock-star status at the time, was the demonstration of what was possible in the then-fledgling field of robotics: allowing mere mortals to be stronger, faster, better, than anything nature could endow. In the four decades since the Bionic Man, science and technology have indeed enhanced and rebuilt the human body.

From dental and cochlear implants to limb prosthetics and artificial organs, the mechanical workings of the human body are well understood and increasingly replicable.

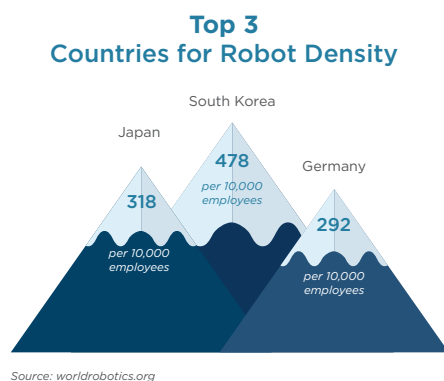
Robots have transcended from science-fiction to reality and we can soon expect them to become a much greater feature of our work and lives. From industrial to surgical and service applications, the robotics industry is on the cusp of explosive growth – forecast to achieve sales of US\$390 billion in 2017 for consumer robots and over \$40 billion for industrial robots by 2020.⁶⁷

Automotive industries around the world lead the way in applied industrial robotics, accounting for about 43% of all industrial robots. The electronics sector, including computers, radio, television, communication and medical equipment, employs about 21% of the world’s industrial robots. Defence industries meanwhile account for the 45% of service robots in operation, mostly purposed as unmanned ground and aerial units or de-mining and bomb disposal robots. In agriculture, sales of milking robots, barn cleaners, field robots and robotic fencers for grazing control continue to grow, while in medicine, robot assisted surgery is becoming increasingly common for high-precision surgical and optical procedures.

Robotics engineers are designing and manufacturing the robots that are joining us in the workplace and moving into our homes. Is a robot already vacuuming and polishing your floors, cleaning your windows or mowing your lawns? If not, perhaps you will be the purchaser of one of over 35 million home service robotic units expected to be sold by 2018.⁶⁸

Many companies are extending their capabilities and are heavily invested in the development of robotics:

- Toyota and Honda are developing humanoid robots that are providing nursing and eldercare support
- Dyson and iRobot are building household and cleaning robots
- Amazon, Jibo and Blue Frog are developing personal and family robots
- Google, Boston Dynamics and Softbank are developing all-purpose humanoid robots
- Paro Robots have created a robotic baby harp seal that provides comfort and company to dementia and nursing home patients, and is approved as a therapeutic device by the U.S. Federal Drug Administration
- and 2015 saw the opening of the Henn-na Hotel, near Nagasaki in Japan, the world’s first fully robot-staffed hotel.



While China is the largest market for robotics, representing 25% of the world supply and the U.S. the third largest, the top countries for robot density (the number of robots per 10,000 employees) are South Korea, Japan and Germany. The comparatively large workforces of China and the U.S. explain that despite their high volume of purchases, robot density remains at 36 and 164 respectively. Combined, these five countries account for 70% of the world's supply of robots.

The forecast for increasing robotics in all facets of work and life is bullish. In the next few years we can expect manufacturing plants to combine real and virtual realities using robotics, the introduction of human and robotic collaboration and higher quality, more affordable robots to work with and for us.

There are, and will continue to be, robust debates about the ethics and boundaries that concern people as robotic capabilities and appearances become more and more human. But this is no different to the privacy and security concerns that are an inescapable reality of the digital world, and will become just another facet of the world in which we live.

Social sensing gets serious

"When most people think of sensors, they imagine being strapped to an EEG with electrodes attached to their head. What they often forget is that everyone already carries dozens of sensors every day."

Ben Waber
Author: People Analytics

It's not a good time for anyone that takes their privacy too seriously. Our digital footprint is deep, clear and almost indelible. Every day, we are creating it, both knowingly (by what we post online), and unwittingly (by where we go and what we do online). Most digital natives don't give it a second thought: they accept this as an inherent feature of the world they grew up in. Many digital immigrants however, find it confronting, invasive and objectionable. Whatever our opinions and concerns, living in the digital era comes with a digital presence.

At work, we have already become accustomed to substantially more surveillance of our daily activities than was prevalent a couple of decades ago. Closed circuit TV scans the office floor; identification tags log our entry and exit; computer servers monitor our online activity. We pay little attention and, if we do, we generally accept this as a means of providing a level of security for ourselves, our colleagues and our customers.

Enter next-generation sensors. The Internet of Things is here and the 'things' will be everywhere in the workplace, including on you. Take, for example, sociometric badges: wearables for the modern worker that gather and analyze millions of data points each day about where you are, with whom you're interacting and the effectiveness of that interaction.

Originally developed at MIT Laboratories and designed as an I.D. card, sociometric badges combine an RFID (radio frequency identification) chip that tracks location, with an infrared transceiver that detects when two people are facing one another, with an accelerometer that senses motion. Add to that a microphone to capture the tone, speed and volume of the interaction and Bluetooth to transport all the data to the cloud for analysis, and you have a wearable device that can predict everything from speed-dating outcomes to salary negotiation results – with somewhat eerie accuracy.

Workplace studies have shown the positive impact of such big data people analytics in predicting:

- which configuration of team members best suit tasks requiring diverse thinking and creativity versus expeditious task execution
- which leaders or team members best facilitate cohesion and collaboration based on meeting participation
- which teams demonstrate higher levels of trust and cooperation and build solid long term relationships.

Importantly, these outcomes are not generated using the actual content of the monitored conversations – that data is not collected because it's not necessary. MIT's research shows that the type, quality and effectiveness of human interactions can be predictably gleaned from *how* we communicate, not *what* we communicate. It may also be comforting to note that privacy is at the forefront of considerations of the sociometric badge: protocols including opt-in, opt-out and informed consent provisions. Individual data control and anonymized aggregated data collection are also crucial to acceptance and adoption of such technology.⁶⁹

How else could organizations use social detection software? Let's take the organizational engagement survey as an example. As we will see in Chapter 3, despite the near-universal adoption of engagement surveys and efforts to increase their efficacy, they remain hopelessly compromised by inaccuracies and human biases. For example, the way in which an employee completes such a survey is consciously and unconsciously impacted by their mood

and personal circumstances on the day, their most recent interactions with colleagues and managers and any number of independent workplace variables – all of which can change from one day to the next and result in vastly different ratings and feedback about their engagement. It is a point-in-time measure, from which broad generalizations are extrapolated.

Compare then, using real-time, continuous feedback from AI and sensor technologies. Organizations could relegate engagement surveys to the past and focus on dynamic information that is significantly more accurate, relevant, timely and most importantly, predictive.

Expect social sensing technologies to play increasingly visible and invisible roles in activities in the workplace.

The new realities: augmented and virtual

“When people ask whether virtual reality will be a real thing or just the next 3D, I say ‘take a headset, walk outside and the next person you meet, put it on them and see what the reaction is.’”

Chris Milk
CEO, Within

Among the most exciting innovations we will see soon in our organizations are programs, experiences and interactions in augmented and virtual reality.

Augmented reality (AR) uses devices such as digital eye-glasses or helmets to superimpose data and images into our perceptive field of vision. For example, being presented with profile data on someone you are meeting for the first time in the glasses you are wearing.

Virtual reality (VR), in contrast, fully immerses the user in a compelling, three-dimensional computer-generated world, often in game settings, by wearing a full head-mounted display.

Both technologies present extensive possibilities for enterprise application. AR enables just-in-time information and learning, remote guidance, mentoring and training, as well as augmented visualization of objects and locations. VR uses deep immersion to allow users to simulate environments, showcase products and services, rehearse activities and practice complex or technical procedures safely in a virtual space. Already used in sports such as baseball, basketball and hockey, the benefits are enormous: error testing, fast and frequent repetition, reduced chance of injuries, muscle memory training, to name a few.

The power of virtual reality lies in its ability to fully engage audio-visual senses via a 360-degree design that can transport us into ‘real’ scenarios. We shift from being observers in a scene, to becoming actors in it. As virtual reality filmmaker and inventor Chris Milk puts it in his stirring TED talk of June 2016,

“Here’s what’s special about VR: in all other mediums, your consciousness interprets the medium; in VR your consciousness is the medium.”

These immersive technologies have been with us for some time – Sega and Nintendo were producing VR games played with consoles and headsets in the 1990s. In 2014 came the launch of Google Glass (although the product failed to meet expectations and was withdrawn a year later). Development continues and technology industry analysts now believe augmented and virtual reality applications have progressed beyond their initial hype, moving out of the *trough of disillusionment* and into the *slope of enlightenment*, where a greater level of product maturity strongly enhances their likelihood of success.⁷⁰

Enterprise applications of AR and VR are still immature, but major progress is anticipated over the next few years. Benefits such as the immediacy of getting information to remote workers, personalizing content, supporting sales demonstrations, reducing the need for business travel and enriching data analytics will quickly drive enterprise demand.⁷¹

These technologies will have transformational implications for talent management functions such as talent acquisition, learning and development. Suffice to say that with these technologies, talent attraction, engagement and productivity make a step-change up that is as significant as was the shift from the icebox to the refrigerator. And in both cases, there is no going back.

On the runway to singularity?

“Within several decades, information-based technologies will encompass all human knowledge and proficiency, ultimately including the pattern-recognition, problem solving skills and emotional and moral intelligence of the human brain itself.”

Ray Kurzweil
Author: The Singularity is Near

The ultimate in augmented and virtual reality, of course, is when technology and biology combine to the point where they are indivisible, where humans and machines become one: singularity.

A century ago, the prospect of technology overtaking human intelligence was laughable; a decade ago we were highly skeptical; today many believe it is inevitable. Merely a matter of time. Not even that much time: technology thought leaders emphasize that we are positioned at the inflection point of the exponential growth curve that will facilitate such advances in the next fifty years.

In 2009, Ray Kurzweil and Peter Diamandis co-founded Singularity University, supported by corporate sponsors including Google, Cisco

and Genentech to channel thought leadership and active programs on technological progress and the future of humanity.

Singularity will create ‘super intelligences’ far beyond the mental processing capacity of the human brain. Machines, quite possibly self-aware and with a form of consciousness, will create even greater machines in an upward spiral of advanced cognition beyond our current comprehension.

It raises the spectre of intelligence beyond human control. Many high-profile thinkers and leaders, including Stephen Hawking, Elon Musk and Bill Gates, warn of the yet-unmitigated risks of developing ever more powerful artificial intelligence that will quickly and easily outstrip the biological and evolutionary limitations of human intelligence. Others are more optimistic and point to natural or technical constraints that will most likely curb the rampant proliferation of this technology.⁷²

Still others consider the prospect of a singularity between human and artificial intelligence to be ludicrous. Evidencing the fundamental difference between the pattern-based cognition of humans and the algorithmic logic of machines, academic thought leader Dave Snowden agrees that augmenting human intelligence represents constructive progress, but that replacing it with artificial intelligence is fundamentally flawed: *“carbon is different from silicon.”*⁷³

Will AI be our most powerful friend, or mankind’s last invention? It’s a big mind-stretch in 2017, but we are already well on the path. A path that is fraught with profound and potentially frightening unknowns. As neuroscientist and philosopher Sam Harris deliberates in a 2016 address titled, *Can we build AI without losing control over it?: “If we are in the process of building some kind of God, now would be a good time to make sure it’s a God we can live with.”*⁷⁴

Jobs and Technology – destruction or creation?

While the digital world continues to generate substantial uncertainty about the future of work, this much is clear:

- some jobs will be eliminated
- many jobs will be transformed, and
- new jobs will be created.

The question is: which jobs, in what industries and how soon?

Musical chairs

*“Are jobs going away?
So the answer to this question is NO.
Jobs are NOT going away, they’re just changing.”*⁷⁵

Josh Bersin
CEO, Bersin by Deloitte

At the macroeconomic level, we accept that the digital transformation brings many new and evolving industries and jobs. We also accept that there will be collateral damage as some workers cannot, or will not, re-tool themselves in the transition. At the individual level, a worker displaced by automation will experience considerable difficulty in finding an alternate career.⁷⁶

Compare, for example, the following two tables: the first showing jobs currently in steep decline and likely facing extinction within the coming decade; the second showing a sample of the jobs of the future with bright trajectories for growth.

Even a cursory glance highlights a profound distinction between the two lists:

- *Old world jobs* are characterized by low skilled, routine or manual tasks requiring minimal creative intelligence and easily replicable by machine automation
- *New world jobs* are characterized by highly skilled, non-routine creative and/or socially focused tasks, the automation of which is difficult or undesirable.

OLD WORLD: Jobs in Decline

Industry	Job Titles
Agriculture	Farmer Farm Hand Logger
Construction & Mining	Miner Site Laborer Mobile Home Installer
Communication	Telephone Operator Switchboard Operator News Reporter
Manufacturing	Textile Machine Operator Textile Dyeing Worker Metal & Plastics Moulder Sewing Machine Operator Metal Caster Fabric & Apparel Pattern Maker Drill-press Operator Seamstress Tailor
Professional Services	Watch Repairer Photographic Processor Desktop Publisher Shoe Machine Operator Meter Reader Jeweller Insurance Underwriter
Transport	Locomotive Firer Motor Vehicle Equipment Installer Parking Enforcement Officer Flight Attendant
Utilities	Postal Service Clerk Post Master Mail Sorter & Processor Mail Carrier/Deliverer

Source: U.S. Bureau of Labor Statistics, Careercast.com

NEW WORLD: Jobs of the Future

Industry	Job Titles
Education	Academic Guidance Specialist Distance Learning Coordinator Professional Tutor Head Start Teacher School Psychometrist
Environment	Biomass Plant Technician Wind Turbine Engineer Natural Resource Economist Energy Auditor Climate Change Analyst Green Marketer
Healthcare	Clinical Data Analyst Community Nutrition Educator Home Care Nurse Biostatistician
Hospitality	Diet Aide Barista Spa & Salon Manager Quality Control Technician Food Geneticist
Human Services	Ergonomist Human Factors Scientist User Experience Lead Cognitive Engineer Nanny Household Manager
Information Technology	Data Scientist Robotics Engineer Cloud Architect Security Analyst Software Developer Computer Support
Manufacturing & Logistics	Mechatronics Engineer R&D Machinist Reliability Engineer Facility Manager Business Process Analyst
Professional Services	Business Intelligence Analyst Criminal Intelligence Specialist Music Therapist Photonics Engineer Search Marketing Strategist
Transport	Traffic Operations Engineer Transportation Planner Project Manager Route Specialist Transit Planning Director

Source: O*Net – Bright Outlook Occupations

In reality, many of the jobs now in decline will not be missed by anyone other than those currently relying on them for an income. If asked, “*what do you want to be when you grow up?*”, few ten year-olds today would aspire to being a Site Laborer, Switchboard Operator or Postal Service Clerk over, say, becoming a Biostatistician, Ergonomist or Robotics Engineer.

The jobs of the future are not just *different* jobs – for the most part, they are *better* jobs. Safer, more mentally stimulating, more socially and environmentally impactful. There are many reasons to be positive about the jobs of the future – which a recent Future Inc. survey found to be the case: 72% of surveyed workers describe themselves as positive or excited about the future of work.⁷⁸

- **Eliminate some**

The case for the systematic phasing out of human involvement in many jobs should be undisputed: if the task is unsafe, unhygienic, physically challenging, routine, repetitive or boring, give it to a machine. In many cases, this relates not to entire jobs, but elements of them. If human technological progress has achieved anything, it should be the emancipation of people from hard, dangerous or menial work.

- **Transform many**

When did you last use a traditional calculator? Like the one that Casio and Hewlett Packard built their brands and businesses on in the 1980s? Today, this software sits on your phone, watch, tablet or laptop – very few of us are carrying a stand-alone calculator.

The same is true of all manner of technology that has automated human activities for the past few centuries. The point is this: we have been developing technologies that augment our abilities (and our limitations) to make us better, faster, stronger and smarter for all human existence. With few exceptions, transforming the work we do by automating elements of it has not made mankind lazy or stupid – rather, it has freed us to focus on bigger and more complex challenges that, at least to date, no machine could solve.

- **Create new**

New jobs and new industries are emerging constantly. The digital platforms created by Google, Apple, Facebook, Microsoft, Amazon and dozens of up-and-coming unicorn companies, open the doors to jobs that are new and many more that are yet to be invented. Digital platforms are creating a new market for advertisers to influence buyers, producers to sell products and services, and workers to market their talents, engage employers and in many cases, deliver work outcomes.

Nobody can tell what this structural upheaval of work means and any attempt to quantify the impact in terms of jobs lost and gained must surely add the disclaimer of “wild guestimate only”. That said, if we can infer anything from the history of mankind, it is that human ingenuity, ambition and perseverance has no bounds and we have adapted – and thrived – with every progressive step forward.

When the music stops, most people will find a chair: it might be a novel or new one, initially uncomfortable, in a different location or with different colleagues positioned next to them. But there will be chairs, and there will be jobs.

Money for nothing

Then there is the growing debate about government funded *universal basic incomes*: a guaranteed minimum income that supports basic living needs (housing, food, utilities) distributed unconditionally to the entire population.

Trials of universal basic incomes are already underway. A pilot conducted over a five-year period in Canada showed positive societal impacts including fewer hospitalizations, accidents and injuries, improved rates of mental health and school graduation, and fewer adolescent pregnancies.⁷⁹

In eight villages in India, trials of unconditional basic income grants, paid in cash to each man, woman and child, replaced previous subsidies for rice, wheat, sugar and kerosene. Controlling their own expenditure using these cash grants, village citizens experienced significant benefits, including improved housing and nutrition, higher rates of school attendance, investment in small businesses and reduced household debt.⁸⁰

Additional trials of such systems are underway in Finland and the U.S.⁸¹

A key concern is *how do countries generate the funds to support a universal basic income?* A U.K. study has calculated that such a welfare system could be delivered at a cost of 282.7 billion pounds, only 5% more than the current 270 billion pound social security budget, predominantly due to significantly reduced bureaucratic and administration costs.

Proponents of these universal safety nets point to the positive economic and social impacts arising from a more equitable distribution of a country's wealth. Conversely, others raise concerns about the purpose and motivation that many derive from work, as well as productivity challenges in such an economic and social experiment.

Too early to tell, but a universal basic income would pose a further challenging dynamic to workforce management. What are the implications when people work not because they need to, only because they want to?

HR and the Technology Challenge

With the boundless possibilities that artificial intelligence, machine learning, robotics, augmented and virtual reality and the Internet of Things will unleash, and their high probability of supplanting many jobs in existence today, you could be forgiven for deeming the human workforce itself to being a relic of the industrial age and largely redundant in a high-tech future.

That would be a very cynical and narrow interpretation. The real question is, in what domains will humans excel, and what can and should the HR contribution be toward achieving that end?

HR's own digital transformation is already well underway. KPMG's 2016 global study notes that 42% of respondents will replace existing on-premise HR solutions with cloud-based HCM software in the next eighteen months. The technology, however, is no panacea in itself: of those who have already migrated to the cloud, 63% state expectations of improved business value-add, but only 24% have been able to realize these.⁸²

To deliver a valued business-focused solution, we see four key areas calling on HR's contribution:

- promoting a digital culture
- championing digital intelligence
- mastering HR analytics
- mobilizing virtual talent.

Promoting a digital culture

*"Digital is not the destination. Rather, it is laying a foundation for a more profound transformation to come."*⁸³

Virginia M. Rometty
Chairman, President & CEO, IBM.

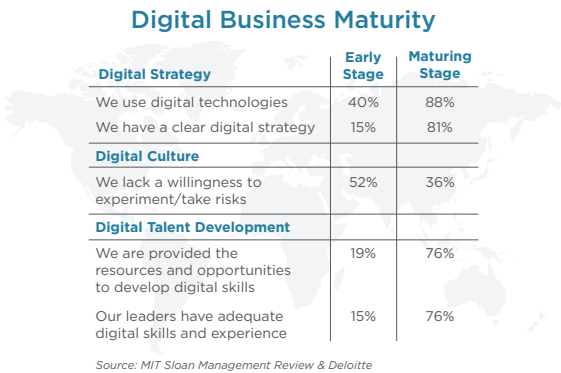
Add the word *digital* to just about anything and its status is immediately elevated. Yet it also suffers a narrow interpretation as a technical term that restricts its perceived relevance to only those who are working with digital technology. Today, every one of us is touched by digital.

Notwithstanding, the majority of today's organizations were not *born digital*. With varying appetite and varying pace, they are considering the implications of digital – adopting technologies, revising business strategy and employing talent with new digital skills. Most have a long way to go and some will fail to make a successful transition.

In a broad global study, MIT Sloan and Deloitte researchers differentiated organizations on a *digital business maturity* spectrum based on their digital

business practices: from early stage (low maturity), to developing stage (moderate maturity), to maturing (high maturity).

Their findings highlighted that digital business maturity was not just a function of the extent to which digital technologies were implemented in the business. More importantly, maturity was associated with the existence of a clear **digital strategy**, a **cultural mindset** that supports experimentation and risk-taking, and dedicated resources to the **development of digital skills** in the employees and leadership of the organization.⁸⁴



Digital strategy

It starts at the top. Leaders must embrace a new vision for their organization in the digital landscape and strategize accordingly. For the most part, digital strategy currently lags digital execution. In digitally immature businesses, few (15%) can present a coherent digital strategy, despite having already implemented many digital technology applications. By comparison, the vast majority (88%) of digitally mature businesses, put strategy first.

Cultural mindset

Digital is as much about people as it is about technology, and the cultural attributes of digitally mature organizations are notably different. Digital is an evolving landscape: there are many unanswered questions and the past is not a reliable indicator of success in the future. That requires a tolerance and appetite for experimentation and risk-taking – attributes that many organizations find uncomfortable or even undesirable. Risk management is essential, however a lack of openness to exploration may close avenues to digital innovation, and even risk exposure to business disruption from unanticipated sources.

Development of digital skills

This is a critical enabler that is almost ignored in digitally immature businesses. Only 19% of employees in these organizations receive adequate support for the development of digital skills, compared to 76% of their counterparts in digitally mature organizations. Moreover, the digital skills of the leadership layers of digitally immature organizations are severely wanting: only 15% demonstrate this capability, compared to 76% in digitally mature ones.

Promoting a digital culture means that HR and IT functions must partner much more closely than they have ever done before. But the need for cross-functional collaboration goes further still. As we have discussed, the workplace of the future will also be a significantly different physical environment from the past, so facilities and procurement functions will equally play a vital role in employee engagement. Only a collective, multidisciplinary approach can establish an effective digital culture.⁸⁵

Championing Digital Intelligence

*"We need to account for the ongoing costs of keeping
our people competitive in tomorrow's economy.
We aren't as easy to upgrade as software."*

Alec Ross
Author: The Industries of the Future

Organizations are on a digital learning trajectory. Many businesses and industries pre-date the digital era; their journey is one of evolution and transformation. Others were created by it; their very DNA is digital and they are driving a digital revolution. In any case, our digital capabilities and experience are embryonic in their development: our biggest leaps are yet to come.

At the heart of HR's contribution to business success will be the proactive alignment of the human capital skills necessary for the organization to achieve its goals, weather the storm of digital transformation, and compete in an uncertain landscape.

That will require HR to operate on multiple strategic and tactical levels that will quickly become overwhelming if the function itself does not transform to adopt digital intelligence.

In the next five years we can expect many emerging HR technologies to become mainstream and integrated into the workplace, including:

- embedded analytics, operating automatically in the background of HR applications to provide detailed diagnostics, predictive forecasts and recommendations for action

- HR systems fully designed and optimized for mobile devices of all varieties (smartphones, tablets, wearables) and employees predominantly accessing business systems through specially developed apps
- augmented and virtual reality interfaces used in recruitment, onboarding, skills training and leadership development
- smart workspaces optimizing collaboration and creativity with integrated surface technologies for desktops and digital walls
- seamless wireless technology transfers between fixed and mobile devices allowing employees to work and collaborate in multiple locations and in transit
- virtual personal assistants that support employee projects and activities.

All this digital interaction will require increasing levels of digital intelligence that is unequally distributed in today's diverse workforce.

HR has a key role to play in facilitating the development of digital intelligence as an organizational competency to ensure that technology is an enabler of the entire workforce.

Mastering HR analytics

*"The data is not the answer – the business story
that is supported by the data is the answer.
But HR cannot speak that language."*

Nick Sutcliffe
Executive Director, The Conference Board, Asia

Perhaps the biggest digitally-induced jolt HR has experienced in the past decade has been the push for data-driven human capital information through the emergence of HR analytics. And a push it has been.

Paradoxically, employees generate a plethora of data points. Just to employ them, pay them and promote them, filing cabinets once could have burst open with all the records they were keeping on every individual in the organization. If any business function could benefit massively from automation, data aggregation and analytics to support decision-making, it would be HR.

Yet the HR journey to digitization has been a slow and often painful one. Incomplete, inaccurate data. Disaggregated systems. Unstructured, unquantifiable notes. And which metrics matter anyway? Migrating the mess to computerized information systems that only function on order and numbers has met with frustration and resistance. In many cases, it has meant rebuilding the HR processes behind the data altogether, just to make them fit.

Fortunately, HR is emerging from that abyss. In many organizations, the sheer size of the workforce and its impact on business strategy execution makes people decisions some of the most important and high impact ones that leaders can make. It is generally accepted that robust data is required to back these decisions, and that requires accurate, reliable and timely data, together with the analytics grunt to interpret it.

The primary goals of HR analytics are to quantify:

- *workplace productivity* (past and present indicators of individual, team and business unit performance), and
- *workforce projections* (forecasts of capability needs to support future goals).

HR is getting better at the former; the latter has some way to go. To support a strong analytics platform, HR needs to further invest in both the infrastructure (technology systems) and know-how (people capabilities) that can deliver it.

Step 1	<p>Alignment with the business: what are the HR metrics that tie to business performance and how is that data sourced?</p> <p>There are three main purposes to gathering this information:⁸⁶</p> <ul style="list-style-type: none">• meeting compliance and risk obligations• assessing organizational ‘health’ via employee engagement, and• determining the business impact of human capital.
Step 2	<p>Ensuring the integrity of data from each source and producing clear and timely reporting outputs that business managers find meaningful.</p>
Step 3	<p>Sharing these outputs with the stakeholders that can use the information to improve individual and business performance.</p> <p>This means interpreting the data to tell the business story, which is a quantum leap from simple report distribution.</p> <p>Some concerns have been raised about the growth of people analytics, such as the propensity for HR to become a surveillance function, surreptitiously gathering information about employees and potentially crossing the ‘creepy line’. Real or perceived, this is a risk and organizations need to manage it by:⁸⁷</p> <ul style="list-style-type: none">• being transparent with employees about the purpose and use of data• tying the data to relevant business outcomes• sharing analytics data with employees wherever possible, and• treating employees as people, not just data points.

Mobilizing virtual talent

“By 2030, 50% of high performers will regularly and seamlessly redistribute workloads across personalized portfolios of talent bots.”⁸⁸

Gartner

Throughout this chapter we have touched on the vast array of technologies either currently available, in production, or being conceived. The workforce of the future, including HR of the future, will, by competitive necessity, avail itself of these technologies.

HR will be developing both human and non-human capital. At this point, perhaps the term *Human Resources* will be insufficient to describe the scope of this function and HR will need to metamorphose into *Talent Warehousing*, or some such relabeling, which recognizes that the capabilities required by the organization may be human, augmented human or machine.

The augmentation of an individual employee’s skills and knowledge to optimize their capabilities will be the cornerstone of success. It will be completely routine for employees to work alongside all manner of virtual talent: some will be human, in the form of colleagues, freelancers and contractors, others will be machines, using advanced AI and robotics. They will necessarily combine as a team to deliver the capabilities required to achieve business outcomes.

The Talent Warehouse will procure, broker and manage the various skills and talents operating in the business. It will use artificial intelligence and machine learning algorithms to source and match the demand and supply of these skills and talents and allocate work to the most appropriate (qualified, authenticated and cost effective) supplier.

Perhaps such a scenario is not as far-fetched as it seems today. It does raise the question: *is technology dehumanizing us?* As one HR Director in the Talent Lab aptly replied:

“Have you ever done your banking online? Ever shopped online? Ever ordered a meal, flight or hotel room online? Did it dehumanize you?”



Boot Camp: Digital Intelligence

Action stations.

The transformation to digital is already under way; business strategies and HR practices that fail to incorporate digital will hold their organizations and employees back. What can HR do to support the development of their organizational digital intelligence (DI)?

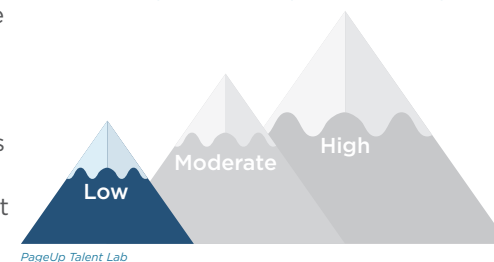
In the DI Boot Camp, we consider three phases of the digital migration for organizations and HR:

- **Warm Up:** preparations that should be undertaken now
- **Work Out:** activities that leverage digital for competitive advantage
- **Wind Down:** legacy systems and processes that should be grandfathered.

What we know

- **DI awareness is high:** Business and HR leaders know that digital is here and conceptually acknowledge its potential and real business impact.
- **DI capability is low:** Both the technology systems and the people skills necessary for optimizing digital opportunities are sub-par.
- **The time horizon is shrinking:** Failing to prepare *is* preparing to fail. Leading organizations are already advancing on the digital maturity spectrum; laggards will suffer competitive pressures and flight of talent within 5 years.

HR Digital Intelligence Rating



What needs doing

- **Embrace the cloud:** Few of the benefits of the digital revolution can be activated offline.

Cloud infrastructure and SaaS applications will lead the wave of social, mobile and analytics capabilities that will transform business and the workforce.

Once cloud-enabled, consider the following DI Boot Camp suggestions in the context of your organization.

DI BOOT CAMP

Warm Up



Social

- Establish a cross-generational task force to brainstorm collaborative technology in your workplace.
- Investigate workplace social collaboration platforms for best fit.
- Engage stakeholders to understand potential usage and encourage adoption.

Work Out



- Launch or relaunch your workplace social network to promote its benefits and accelerate adoption.
- Enlist influencers and highly engaged users to drive participation at all levels of the organization.

Wind Down



- Discourage tools such as email or ad hoc messaging apps for internal communication.

DI BOOT CAMP

Mobile

- Audit current HR applications with a view to mobile optimization.
- Consider which employee and business services can benefit from being accessed via wearable devices.
- Canvass all stakeholders.
- Prepare a mobile strategy – distribution, support & ethics.

- Trial HR apps on mobile devices: begin with HRIS admin, recruitment and onboarding – progress to broader talent management tools.
- Pilot wearables in areas that benefit employees, such as wellness and personal productivity.

- Grandfather employee-facing HR applications that do not support mobile access.

Analytics

- Determine which metrics link to business outcomes.
- Obtain leadership input and buy-in.
- Consider data sources beyond HR systems.
- Audit current analytics capabilities (systems and people).

- Allocate budget and resources to ramp up analytics capabilities.
- Quantify workforce plans with analytics and forecasts.
- Build HR skills that tell the business story from the HR data.

- Eliminate reporting noise that has little or no business impact.

Talent Lab 1

In a hyper-connected world, is HR disconnected?

Top 10 Quotes from Talent Lab Contributors

- "My forecast for the future is probably as good as a 19th century farmer's forecast of what work would look like today."*

Thought Leader - U.S.
- "If HR doesn't redefine itself, business will step in and fill the void."*

HR General Manager, financial services organization
- "The question we should ask is 'what's the nature of the employment experience we are creating?' Not - 'did you sit at your desk for 8 hours today?'"*

HR Director, not-for-profit organization
- "Until we have HR teams that come to work each morning saying, 'I cannot wait to see the data out of the system to see what cool stuff I can do with it', HR will not be viewed as an evidence-based function."*

Thought Leader - U.S.
- "HR needs to stop confusing people and make sure the tools are crisp, clean and connected."*

HR Director, industrial services organization
- "The data is not the answer - the business story that is supported by the data is the answer. But HR cannot speak that language."*

Thought Leader - Singapore
- "Keeping workers engaged while balancing Millennial new hires is a high-wire act."*

HR Director, transport services organization
- "We have to look at more flexible contracts and we are increasingly turning to global mobility."*

HR Director, higher education organization
- "Very few business people have seen HR done well. They don't know what they're not getting."*

Thought Leader - Australia
- "Ten years ago, customers just bought from our stores. We would never have thought of job titles such as digital marketing specialist or social media manager."*

HR Director, retail organization

In Talent Lab 1 we asked a big, and what became a mostly rhetorical, question: *in a hyper-connected world, is HR disconnected?* In interview after interview, with industry thought leaders and HR executives, we drew a resounding conclusion: yes.

Moreover, the topic was designed specifically to explore the HR response to the technological revolution confronting organizations and employers in the digital age: how ready, willing and able is HR to meet the technology challenge? What we experienced was a second layer of interpretation about the alignment of HR with business leaders and business practices. The hyper-connections required to cut through silos and function effectively in a VUCA business world were equally raised as an HR-disconnect. We explore this aspect in detail in Chapter 4.

No industry or organization claims to be immune to the spread of technology advances and the transformation they will bring. Nor do they want to be - these are fundamental to remaining relevant and sourcing new areas for competitive advantage. In Lab 1, we charted five key findings that reflect the impact of digital technology on business and HR.

Talent Lab 1: Summary of Findings	
1	Technology and demographics are accelerating the reshaping of jobs and work
2	A new workforce calls for a new workforce plan
3	Consumer technologies reset the bar
4	HR lags in the uptake of technology
5	Future scenarios for HR include evolution, metamorphosis and extinction

1. Technology and demographics are accelerating the reshaping of jobs and work

There is nothing new about technology reshaping jobs – that has been happening steadily for centuries: what *is* new is the pace, depth and scale. Think about the work you did a decade ago and the tools with which you did it. In that sentimental reflection, you are no doubt recalling a workplace that was simpler, less sophisticated and somewhat slower.

There is also nothing new about generational change and its impact on work: what *is* new is the inversion of skills that mean Millennials are often more knowledgeable about the new digital tools of trade than their tenured managers and leaders. That has threatened industrial-age organizational hierarchies and spawned a new set of expectations about the workplace.

Combined, these two factors have been transformational in their impact. We are reaching a demographic tipping point at which Millennials will outnumber their predecessors in the workforce. That will trigger an even larger, more powerful wave of change to unleash digital capabilities that have been brewing and gathering momentum.

2. A new workforce calls for a new workforce plan

Strategic workforce planning, let's be honest, has never been a major HR strength. Lack of strategic foresight has led to mostly tactical plans that lack visionary texture and, at best, identify key roles that must be filled and core capabilities that must be developed to meet foreseeable business needs. Butts on seats.

And that is before it actually gets tricky. When your workforce is predominantly a mix of permanent employees (full time and part time), locked in via employment contracts (the terms and conditions of which are employer-determined), the balance of power is with the organization. But that is not the labor market of the future. In fact, that world is fast dissolving, even as we contemplate the shift.

Very soon, HR will need to accommodate a workforce made up of independent contractors, freelancers and contingent workers of all kinds, as well as a core 'permanent' cohort. Consider the implications for:

- job design and remuneration
- talent acquisition and procurement
- cross-jurisdictional labor agreements
- remote workforce management
- team collaboration and project delivery
- individual and team engagement
- team and organizational culture

At the pace with which many job tasks are lending themselves to automation, workforce plans of the future must look deeply into not just what workforce capabilities are necessary to achieve the business goals, but the broad options for how and where these can be sourced and the means by which to acquire them.

HR analytics will support forecasting human capital needs. In addition, HR will need an open-minded, elastic approach to compiling workforce plans, which themselves will be dynamic and responsive, based on continuing changes in the technology and labor marketplaces.

3. Consumer technologies reset the bar

Your smartphone and tablet give you instant online access wherever you are. The apps displayed on them have clear, alluring interfaces allowing for easy navigation and an engaging (often captivating) experience. You chat with friends, catch up on news and events, check your bank account, play some games and video-chat with your sister holidaying in Thailand. Then you arrive at work, where a decades-old enterprise system, depicting bland, unintuitive screens that take far too long to load and require multiple logins, awaits you. You will spend up to six of the next eight hours staring into that screen in order to get your work done. It shouldn't have to be that way; and it won't be much longer.

Consumer technologies (devices and apps) are resetting the bar; workers want to engage with them because they are easy and appealing to use. Millennials are increasingly intolerant of 'bad' technology and readily deem their employers of choice as those with state-of-the-art technology and flexible work practices. Consequently, the *employee experience* is now gaining a similar focus to that of the *customer experience* and treated equally as a lever of competitive advantage.

In the Lab, we found that despite a conceptual knowledge and acceptance of these changes, HR practices remain slow to follow. Candidate engagement, onboarding, performance and learning processes show limited progress in the application of digital technologies:

- mobile optimization of corporate career websites is low (29% in Australia, 30% in Hong Kong, 10% in Southeast Asia) resulting in a poor mobile experience for job applicants⁸⁹
- only 34% of organizations have tapped into gamification technology to enhance their HR processes⁹⁰
- only 58% of CEOs agree that their HR teams are using digital technology effectively to source, develop and retain talent.⁹¹

4. HR lags in the uptake of technology

On the surface, it would appear there is significantly more technology implemented in HR than there ever has been. That is true. The automation of basic and essential HR information, including employee profiles, employment history and payroll data, have been computerized for many years.

Even high volume, process-driven talent management functions such as recruitment, onboarding and performance management have become more automated, or technology has augmented the skills of recruiters and managers to conduct these tasks more efficiently. In fact, organizations that have made these changes have shown enhanced business performance including, on average, a 13% higher rate of return on equity.⁹²

The stuck-point has really been shifting beyond process automation to more advanced, strategic and analytical applications. A great disparity remains between intent and execution of this technology: 75% of organizations believe HR analytics are important, yet only 8% of these firms see this as a current strength.⁹³

The lag in uptake is attributed to:

- legacy or dis-integrated HR systems that do not unify HRIS and talent management data and may not have online and/or analytics functionality
- insufficient data science capabilities in the current cohort of HR practitioners (given this skill has been under-represented in HR education and training)
- lack of clarity about what metrics matter and how to measure components of HR management that are difficult to quantify.

5. Future scenarios for HR include evolution, metamorphosis and extinction

With all the baggage and shortcomings many HR departments carry, their sheer survival in the future of work must be questioned. Certainly, there are many doomsayers. The Harvard Business Review cover page of July/August 2015 entitled “*It’s time to blow up HR and build something new*” added fuel to the fiery debate and controversy over the failings and future of HR.

In the Talent Lab, while the conclusion was less definitive and less provocative, we found evidence, together with a directional shift, toward the reinvention of HR, albeit in a variety of forms.

Extinction

In the extinction scenario, the HR population in the organization progressively declines as an inevitable result of:

- **devolving** many HR and talent management practices to line managers who have finally developed good management and leadership capabilities
- **eliminating** many invented-in-the-industrial-age practices that have become outdated, unimportant or irrelevant
- **automating** all administrative HR functions and leveraging fast, fun and effective digital applications to deliver many valuable HR initiatives, and
- **outsourcing** any work that can be completed better, cheaper or faster elsewhere.



Extinction

Transactional HR and talent management are no longer the remit of HR.

Metamorphosis

In this scenario, HR reshapes itself around high value-adding activities that rely heavily on strategic and human capabilities by:

- **coaching** business managers and leaders to motivate, guide and optimize their teams using advanced behavioral and psychological insights
- **empowering** employees and managers using guided self-management, team leadership and virtual collaboration principles
- **emancipating** the organizations from ineffective, laborious or low-impact processes
- **strategizing** to build the workforce capabilities of the future and executing to ensure they are available in the organization when required.



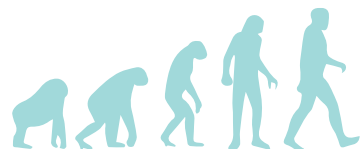
Metamorphosis

HR practitioners become coaches, enablers and strategic decision makers.

Evolution

Redefining how HR achieves business-focused results by changing the mix of HR skills to emphasize business acumen and skills quite possibly drawn from non-HR backgrounds, including:

- **business management** skills that develop workforce strategies aligned to business goals via a first-hand understanding of the key business drivers
- **marketing** skills that communicate workplace offerings to existing and potential employees as product offerings are presented to attract existing and potential customers
- **data science** capabilities that accurately present predictive and prescriptive workforce statistics and scenarios to enable data-driven decision-making, and
- **organizational design and development** skills that facilitate the creation of effective real and virtual workplaces, factoring in social and environmental goals and outcomes.



Evolution

A new breed of HR professional emerges with a focus on analytics and workforce management.

In a hyper-connected world, HR has some way to travel to reach its own optimal levels of performance and be acknowledged as a requisite function in the organization. There is no one ultimate outcome – rather, HR will change in every organization to suit the culture, structure and needs of that business.

We found many examples and reasons to be optimistic about HR's future – but the challenges need to be confronted today to ensure HR remains not only relevant, but indispensable in the workplace of the future. In the absence of widespread adoption, technology will only widen the chasm.

Own Your Future: How to Prepare for the New World of Work

Su-Yen Wong

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Su-Yen is also Non-Executive Chairman of Nera Telecommunications, an Independent Director at MediaCorp and Yoma Strategic Holdings, and an active member of the Singapore Institute of Directors, Women Corporate Directors, and the Young Presidents' Organization.



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In a world where robots, automation and gamification become the norm, how can a workforce adjust to be future-ready? For a start, by becoming more human. Here, we explore how technology is revolutionizing the workplace.

In the movie *Back to the Future II* (1985), Dr Emmett Brown ("Doc"), an eccentric inventor and scientist, briefly transports protagonist Marty McFly to 21 October 2015. McFly, a curious teenager, gets a glimpse into the future and sees technology that is now taken for granted. Today biometric recognition and smartpay are both incorporated into the Apple iPhone, while high-tech glasses that the movie characters use to watch TV look surprisingly similar to Google Glass and Oculus Rift. What was once considered futuristic is now our reality. As technology augments our lives and simplifies processes, we need to consider how these advances impact our jobs and the workplace.

Work, as we know it, will continue to shift towards increasing task automation. McKinsey & Company research published in 2016 shows that after researching 800 jobs in the United States and studying 2,000 tasks for all occupations, current technologies could automate 45% of the activities people are paid to perform. They estimate that about 60% of all occupations could see up to 30% of their constituent activities automated. However, McKinsey's research also finds that fewer than 5% of occupations can be fully automated by current technologies. This means that leaders need to analyze their team's tasks to identify what is likely to

be automated and how this will change workers' engagement with their jobs and companies.

Both high-paid occupations as well as lower-wage occupations will be impacted. "We estimate that activities consuming more than 20% of a CEO's working time could be automated. Conversely, there are many lower-wage occupations such as home health aides, landscapers and maintenance workers, where only a small percentage of their work can be automated with readily available technologies," explains Oliver Tonby, Managing Partner, Southeast Asia at McKinsey & Company.

As robots grow ever more skilled at mimicking human tasks, the human touch will become increasingly valued. Automation of work tasks also means that some workers cycle through positions faster. "We anticipate the rise of rollercoaster career paths. As technological changes and industrial restructuring proceed at a faster pace, skills and job categories become obsolete and force more workers to undergo retraining and mid-career job changes," explains Tan Gan Hup, Associate Director (SMU-X), Singapore Management University.

Should we be wary of these changes or is there an opportunity to harness these advances and use them to the advantage of the company? Is it time to slip on the virtual reality (VR) goggles, and revisit organizational culture?

The Company's Responsibility

Just as individuals need to anticipate the future, companies must also look at their current talent and predict future gaps. What role or time consuming tasks will be automated in the next five years? Or in the next 10 years? HR leaders need to look forward and work with business to predict future needs. "Leaders from the C-suite to the front line will need to redefine jobs and entire business processes so that their organizations can take advantage of automation potential. The opportunities exist far beyond labor savings. The benefits typically are between 3 to 10 times the cost, and the magnitude suggests that the ability to staff, manage and lead increasingly automated organizations will become an important competitive differentiator," explains Tonby.

Here are three ways that leaders can get their companies ahead of the talent curve by acting on tomorrow, today.

1. Understand the future of work

"Many employers are taking advantage of new technologies (such as big data analysis) to help develop far more targeted training programs," explains Fraser Thompson, Director, AlphaBeta, a strategy advisory business. Why do people join companies? Millennials, for example, sign up where they feel they share similar values. Millennials, more so than Baby

Boomers and Gen Xers, look for companies that provide opportunities to learn and grow. Since employees no longer join companies for life, companies must look to attract and retain through their professional development. And with the use of big data analysis, HR can discover how to raise engagement; discover what motivates, deters and inspires employees; and use data to develop and accurately measure key performance indicators (KPIs).

2. Do what you can with your existing talent pool

Look at your employees' skill sets and what their current tasks are. Identify what will likely not exist in the next two to five years. How can you help to upskill and re-skill your current team? What can you move around to help them cope with future tasks? For example, today people are trained in how to operate a forklift. But in the near future, that same employee will likely need to know how to operate the robot that will control the forklift. "Rather than destroy jobs, technology can be expected to instead change roles, allowing workers to focus on other key areas of their work," states a recent report from Hays Journal.

An example is self-service checkout lines in supermarkets and algorithms that can search documents for specific information. How can you begin to transition your team so that they use more technology or automation?

3. Bring in fresh talent smartly

What stretch assignments can be assigned that will better align your team with their future plans, interests and prospects? How can this be done in a way that matches their personal aspirations?

How can your company better use metrics to predict performance? Let's take Tata Consultancy Services (TCS) as an example. TCS employs over 362,000 professionals and in the financial year 2016, hired 90,000 new employees. One way they simplified hiring was to adopt a gamified system called Campus Commune, in which they engaged with students from their first day at university. For example, training modules and coding or design challenges help evaluate potential bright sparks among users. Over three to four years, the digital footprint yields a clear picture of likes, abilities, interests and existing competencies.

How can you implement something like this? One way is to track employees' digital footprint from day one. Include psychometric assessments and personality tests — both personal and professional — and their feedback. Also, work towards using gamification for upskilling and as a fun alternative to e-learning for policies and HR.

Embracing the Future

Rather than fear the future and how automation may change work, this should be looked at as an opportunity. Just think of the time-intensive and repetitive tasks that could be automated: lawyers will spend less time in prep work, hospital staff will speed up administrative tasks like patient paperwork and HR professionals will onboard new employees in far less time. The advances in technology could mean more energy dedicated to creative tasks, critical thinking and to improving humankind itself. It's the responsibility of employees to prepare for the future. While what that will look like remains uncertain, developing the skills mentioned above will prepare us for our VUCA world.

In the surrealist novel *Invisible Monsters* by American author Chuck Palahniuk, he posits, "When did the future switch from being a promise to being a threat?" The novel is a tale of a former model who reinvents herself after an accident. The unnamed protagonist deals with the realization that her future won't be what she always thought. Palahniuk is onto something — what if we seek opportunities and look for promises of the advantages the future will bring? In the process, how will we respond if we get blindsided by abrupt shocks?

In many ways, the future is what we make of it. If we approach it as a time of great opportunity, and choose to continually bounce forward despite temporary setbacks, it might just turn out a fulfilled promise. In other words, let's look at the future with rose-tinted VR glasses — and power on.

Working with Intelligent ‘Beings’

Kevin Wheeler
CEO and Founder,
Future of Talent Institute

Globally recognized as an expert on human capital acquisition and development, Kevin is a sought-after speaker, author, consultant and university lecturer on HR topics.



Today's recruiter goes through her work tied closely to a computer, smartphone or tablet. She accesses the Internet to source candidates and to learn about them from social media sites such as Facebook or LinkedIn. Candidate resumes are received by email and she adds them to her applicant tracking system. She may send messages to the candidate from a candidate relationship management system (CRM) that will also allow her to schedule messages later. She may set up appointments for interviews with a calendar app or set up a video interview over Skype or via a dedicated video interviewing product. In some cases, she might ask an applicant to take a test of some sort online to verify skills or to assess their cultural fit for the organization.

Nothing remarkable, yet amazing compared to 25 or even 15 years ago. A revolution has taken place, almost unnoticed, since 1995 when the computer and the Internet were primitive.

Technology has become inextricably woven into our daily routines and very few recruiters or human resources people could imagine working without computers or Internet-based tools.

But had I predicted any of this in 1995, I would have been considered a bit looney, if not outright deranged. We were struggling to use email, had access to a most primitive browser called Mosaic, which only a few knew how to install or use, and the programs available were mostly games or very simple utilities.

So what do the next 10 years promise us?

First of all, the future will probably look a lot stranger in hindsight than we can imagine. New services and products will emerge that are impossible to envision today – either because we do not yet have the science to develop them or because they depend on being built on something else that does not exist yet.

We are going to have our assumptions about many things challenged, changed and rethought. Here are three things that I think are most likely to happen.

1. Computers will all but disappear into services we use. They will become as invisible as the electric motors or integrated circuits, for example, that are embedded into everything from refrigerators and washing machines to automobiles.

Instead we will speak with intelligent “beings” (*I have no idea what to call them, so for now I will use “beings”*) such as Siri or Alexa and they will do what we ask of them. We will say, “Find me a mining engineer with a master’s degree who lives within 25 miles of Perth and is about to leave his current employer.” These intelligent beings will be able to find someone like this, assess their likelihood of leaving the current employer using predictive analytics, locate them with GPS and provide you not only their names, but also a strategy for convincing them to consider a new opportunity based on an assessment of their personality.

Sound like science fiction? Most of this can be done today, albeit by disconnected technologies that are yet to speak to each other. But this will be overcome easily within the next decade.

These ‘beings’ will automate the majority of sourcing and even suggest the best way to find a particular type of person or profession. They will have access to data on labor markets, labor supply, salary expectations and much more so they can advise you or a hiring manager on where to look and how to approach a candidate.

2. Chatbots will replace much of our candidate conversation and engagement. These applications are embedded into websites that interact with candidates in real-time, using natural human language (in whatever language the candidate prefers). They utilize machine learning, artificial intelligence, and algorithms to respond intelligently to a candidate. They can ask questions, interpret the responses, and provide answers or information. They may be able to carry out the entire interview and assessment process with no human involvement. If you have accessed a site for customer support, you may have already encountered a primitive form of chatbot. If a box has popped up with someone’s name, such as Rob or Ravi, saying they are there to answer your question, you have met a chatbot. Masquerading as people, they respond to a large percentage of commonly asked questions and solve common problems. Most of them are not really ‘intelligent’ but look up answers in a table and speak them back to you. Whenever they cannot find an answer, they transfer the call to a ‘real’ human. However, each year they get better at what they do and soon will be able to learn and improve on their own.

There are a few firms offering versions of these to recruiters and there will be more in the coming year.

3. Imagine that any candidate offered a position is highly skilled, capable and motivated. That he will stay for as long as predicted, barring health or emergencies. And that he will accept the position at a salary your firm can easily afford.

Impossible? Maybe not. The amount of data that exists about each of us online is astounding. Our Facebook and LinkedIn profiles, as well as Twitter accounts are filled with data including things you did not actually enter but can be inferred from your profiles, posts and likes. These include marital status, political affiliation, socio-economic status, products you like, service complaints, and so forth. Perhaps you have taken a trip and completed a Yelp or TripAdvisor review. Maybe you have a blog. All of this is fuel to assess your personality, interests, skills, and much more. A Chatbot may engage you in conversation and ask you to take a test or complete a profile. And then all of this will be run through the algorithms a firm has developed for what makes someone successful in a position. From this they can determine the likelihood you will accept an offer at a particular salary and how well you will perform.

Assessment of candidates is going to not only be automated, but become far more sophisticated and complex, enabling the scenario above to become a reality. It will outstrip any recruiter's ability to predict performance, cultural fit or length of tenure. The economic benefits of this are enormous and a greater amount of objectivity when we remove a recruiter's personal biases will lead to more diverse candidates getting hired and to a more creative workforce.

Assessments can be modified to allow less qualified people to be hired knowing that development will be necessary. This may be fine in order to build a workforce and attract people who are predicted to have high motivation and high ability to learn. Happier and more competent people will reduce HR complaints, litigation, and workers compensation.

In the next decade, expect human resources management to be transformed – it may even not exist as it is today.

Chapter 3: People and Relationships



In Brief

- A new psychological contract binds employers and employees, in which power is more equally shared and the relationship value is more transactional in nature.
- Employee engagement changes continuously based on four factors: the alignment of purpose, social connection, organizational structures and policies, and the nature of the job.
- The new employment 'deal' recognizes that careers are plastic and changeable and talent is borderless and mobile.
- Employers have not yet adjusted to the increasing proportion of on-demand labor in their workforce mix and need strategies for talent portfolio management.
- Scientific advances in neuroscience, combined with new digital technologies, are challenging existing management paradigms and opening broad possibilities for cognitive enhancement.
- An open market for global talent suggests a new approach that views skills in the context of a talent ecosystem is warranted.
- The challenges and opportunities presented by workforce diversity will manifest themselves increasingly in the future workplace.
- Talent Lab 2 findings:
 - Engagement: It's about alignment, not happiness
 - Surveys are out of fashion
 - HR needs to produce business, not HR metrics
 - Generational differences are overplayed
 - Technology is underrated
 - Performance and engagement are two sides of a coin

The digital revolution is not occurring in a vacuum. A similarly profound transformation is visible in society, in economics, in politics. Metaphorically, the social fabric has been recut and retextured - from steady beige and grey to a blushing kaleidoscope of shapes and colors.

The relationships people have with their families, their neighbors and local communities have evolved. In many cases, relationships have become less formal, more open and more accommodating - but also more superficial, more transient, and less trusting.

Workplace relationships have also changed: between workers and their colleagues and workers and their employers. Jobs for life are gone. Loyalty is gone.

A new psychological contract applies.
The employment relationship is nebulous.
Career mobility becomes the trading currency.

Trust me, I'm an Employer

Perhaps it started in the 1990's when HR began to shed its heritage of compliance and administration and convinced CEO's that *people are our greatest asset*. Growing organizations operating in cutthroat markets where product, position and price failed to adequately differentiate them, turned to people as their X factor for creating competitive advantage.

Unfortunately, classifying people as a balance sheet item also exposed them to the contrapositive when business got tough: *people become a costly liability*. This expensive item on the ledger became susceptible to the dispassionate treatment afforded to every other business asset: people became headcount, headcount was required to produce a return on investment and was subject to redundancy and divestment.

The spate of retrenchments that followed, and the continued business-as-usual use of redundancies as a mechanism to trim organizational fat, has resulted in a predictable outcome: employee distrust and disloyalty.

For a while, it became the accepted new order that the trust bond was broken, and beyond repair. But trust is back in fashion. That's because trust cuts to the core of what employees seek in their work relationships and a high-trust work environment has significant effects on individual performance, including:⁹⁴

- 74% less stress
- 106% more work energy
- 50% higher productivity
- 13% fewer sick days
- 76% higher engagement
- 40% less burnout.

Today, organizations are trying to recover some of the lost ground, promoting employee-friendly value propositions and reinventing themselves as great places to work. At the core of this revival is an essential tenet: employees must feel safe to work, to express their ideas and to share information. Trust is built in the safety zone.

As author and speaker Simon Sinek notes: *“There are no fancy management theories and it is not about hiring dream teams. It is just a matter of biology and anthropology. If certain conditions are met and people inside an organization feel safe among each other, they will work together to achieve things none of them could have achieved alone. The result is that their organization towers over their competitors.”*⁹⁵

What's the deal?

“The philosophy of caring for employees and striving for results appears, to some, to be counterintuitive. It is not.”

Jack & Patricia Phillips
Authors: High-Impact Human Capital Strategy

Becoming a talent magnet is priority one in many organizations right now. There is considerable resourcing – time, effort and money – pitched at the development of compelling *employee value propositions* (EVPs). Another concept borrowed from colleagues in marketing (originators of the *customer value proposition*), an organization's EVP is often seen as a make-or-break competitive play to attract and lure the quantity and quality of talent needed for the business to function and succeed.

Like the corporate brand, the employment brand speaks to the culture, characteristics and personality of an organization and the business case for getting it right is strong. It has been repeatedly shown that an effective EVP results in significant gains in employee commitment and advocacy, as well as a reduction in the need to entice prospective hires with compensation premiums.

In crafting a plausible ‘deal’ to put to the talent market, organizations face a few important challenges:

- **‘Wannabe’ EVPs:** In their eagerness to paint a highly compelling picture of the organization, many corporate communicators have created aspirational employment propositions of what the business ‘wants to be’ rather than what it *actually is*. That may secure the prize in the short term but ultimately leads to the disappointment of new recruits who bought the story, and feel they have been short-changed.

Suggestion: Stick to authenticity. It's not necessary or desirable to do a warts-and-all exposé of your organization's shortcomings, but real stories, current employee testimonials and day-in-the-life glimpses will

appeal to those prospective employees that fit with your culture and work environment.

- **Differentiation:** There are few truly unique differentiators in the world of work: your organization's avowed dedication to customer service, commitment to career development and championing a fun, engaging work environment are all common attributes that competitors for the talent you desire also espouse and promote.

Suggestion: Be clear on how your organization does things differently. Share customer ‘wows’, track the career paths of some of your employees, provide audio-visual evidence of your work environment.

- **Integration:** The EVP is much more than a one-off advertisement for employment opportunities and its audience reach is broader than prospective hires – every existing employee is a constituent in this environment and their workplace experience spans the entire duration of their employment. This means that long after the hiring event, their experience of HR practices such as learning and development, performance management, compensation, promotions and succession, becomes their reality.

Suggestion: Engage in continuous listening. Integrate feedback from surveys, formal reviews, informal discussions, internal and external social networks. Glean insights from independent employment rating sites such as Glassdoor and Vault that can be used to address issues (perceived or real) faced by employees and job seekers.

The employee engagement conundrum

*“Autonomy, mastery and purpose are the building blocks of an entirely new operating system for business.”*⁹⁶

Dan Pink
Author: Drive

What's wrong with this picture?

A candidate sees her dream job advertised and excitedly submits a job application. Thrilled to be invited for an interview, she puts forward her best self with all the apprehension and preparation she would channel for a first date. She endures the rigors of the assessment and selection process and, with unmasked excitement that could only be trumped by a lottery win, calls her friends and family to declare “I got the job! I got the job!”

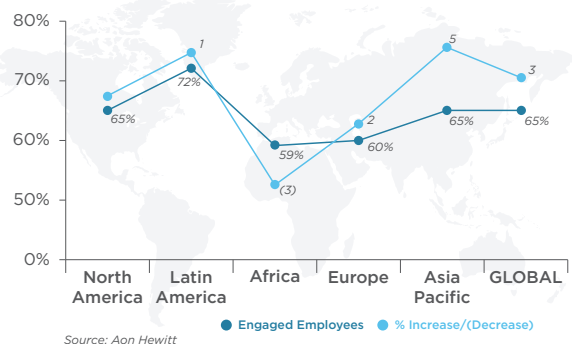
Twelve months later the honeymoon is over. She joins the ranks of disengaged workers. She wakes each workday wishing for the weekend and counts the hours till she can escape. No discretionary effort. No creativity. No passion. What happened?

The factors that impact whether or not employees are engaged at work are so diverse, individually variable and in constant flux that HR and business leaders are understandably left scratching their heads for what to do about it. We covered this issue in detail in the Talent Lab (the outputs of which are presented at the end of this chapter). Our conclusions pointed to a multidimensional composite of what drives employee engagement:

- *Purpose*: what the organization stands for and how connected employees feel to that vision and mission
- *Social*: who employees work with, the personal and professional relationships they build and how well these facilitate effective teamwork and collaboration
- *Structure*: the environment in which employees work and the organizational policies and practices that support or hinder them, and
- *Vocation*: the job itself, the challenge and learning it presents and the career opportunities that arise from it.

Worldwide, employee engagement is steadily inching its way up, in all regions except Africa. Two-thirds or more of employees in North America, Latin America and Asia Pacific attest to being engaged, with Europe not far behind.

Global Engagement Trends 2016



These consolidated statistics do however belie underlying variations both at the country level and by the level of engagement. Globally, for example, of the 65% level of engagement reported, only 25% of employees are *highly engaged*, with 40% *moderately engaged*. Equally interesting is the 35% disengaged population, 22% of which is *passively disengaged* and 14% *actively disengaged*.⁹⁷

Behind these employee engagement levels are business questions in need of answers:

- Does employee engagement drive organizational performance or the reverse?
- Does the organizational impact of employee engagement initiatives justify the effort and expense?

The first is a chicken-and-egg question that challenges the most frequent case made in favor of measuring engagement: that you need higher levels of it to increase business outcomes. It's intuitively expedient to draw a causal link from engagement to performance – after all, happy employees are more productive, aren't they?

Certainly, many independent studies support the connection between engagement levels and employee performance. Some highlight specific factors, such as the working environment and team/co-worker relationships, as having significant effects on performance outputs.⁹⁸ Others attest to the positive relationship between having fun at work and both task and creative performance, as well as higher levels of organizational citizenship behavior.⁹⁹

That said, our research in the Talent Lab suggests that the interplay between employee engagement and performance is more correlational than causal. Consider the many companies that drive high-performance cultures, with the positive side-effects of attracting and retaining highly engaged employees who thrive on winning and performance excellence. While the argument may seem circular, it does have implications for the approach organizations take to employee engagement: is it a means to an end or an end in itself? We discuss this further at the end of this chapter.

The second question is a return-on-investment challenge that can only be answered if clear and agreed measures are determined at the outset. For example, *what are appropriate and measureable elements of organizational impact attributable to employee engagement?*

- *Profitability*: a measure of financial impact, comparing different engagement survey periods, holding all other variables constant?
- *Employee Net Promoter Score*: a measure of ambassadorship, tracking employee recommendations of the organization as a great place to work?
- *Absenteeism or Turnover*: a measure of the change in employee well-being or unwanted turnover, linking team and departmental statistics with engagement survey results?

Employee engagement has many advocates in both human resources and business leadership ranks and has been set as an umbrella goal for many organizations due to its potential and far-reaching impact. But this zeal for employee engagement is also behind an emerging backlash against measurement for measurement's sake.

Form over substance

“Carrying out expensive and time-consuming organization-wide engagement surveys is a ‘spray and pray’ approach that provides meaningless data at too high a level, which most organizations fail to action effectively.”¹⁰⁰

Nick Holley
Director, Corporate Research Forum

Everyone seems to want your input these days – though you rarely get to see the output. Survey fatigue is a serious 21st century ailment. Add to that the underwhelming impact of survey results and the fractional responses to the feedback obtained, and you have the level of disillusionment that many organizations report about this annual ritual.

The challenge is one of relevance, timeliness, authenticity and outcomes. Leaders should really step back from the employee engagement process and focus on the purpose: *what are we seeking to achieve by measuring employee engagement?* If a consensus can be reached on the answer to this question and the effort can justify the means, industry experts suggest these further questions require satisfactory resolution prior to embarking on the surveying task:¹⁰¹

- *is leadership committed to acting on the results?*
- *which engagement drivers are most important to the organization?*
- *can the organization actually improve the challenges it faces?*

Answers to such questions underpin an *engagement strategy* – only one component of which is the measurement of engagement. While traditional surveys remain the most popular mechanism for now (and many have engaging, even playful online interfaces), they continue to suffer issues of bias, integrity and meaningful integration with overall employee information.

Big data to the rescue. We are on the cusp of a transformation in how organizations gather and interpret information about how engaged we are – really are. As flagged in the previous chapter, an explosion of workplace and personal sensors will soon automatically and invisibly transmit millions of bits of data about your daily work experience – there will be no need to trouble you for your input. That data will capture an actual reflection of your mood, productivity and collaboration efforts rather than your biased or engineered perception of what’s going on.

If that’s too Big Brother, at the very least we can expect machine learning algorithms to vastly improve the engagement survey experience. Text analytics will scrutinize volumes of text feedback to figure out what we are satisfied and dissatisfied with, while pattern recognition algorithms will learn to predict the nuanced sentiments of various cohorts of respondents, such as Millennials, or women, or field sales representatives. The estimated US\$1 billion engagement survey market will be under the spotlight to produce real business outcomes with these technological advances.¹⁰²

The End of the Employee

In the 21st century we accept that a career isn’t what it used to be. Once, you went to school, pursued tertiary studies, apprenticeships or training to qualify for a profession, and then stuck with that, by and large. Careers were linear. You started in the junior ranks, worked your way up and through the system, perhaps changed employers once or twice or even thrice. You picked a path. You certainly didn’t plan to reinvent yourself along the way.

Careers are plastic and talent is mobile

“The future, in so many areas, is there to be shaped, by us and for us; a time when the only prediction that will hold true is that no prediction will hold true.”¹⁰³

Charles Handy
Writer, Broadcaster & Teacher

Almost everything developed for the 20th century workforce is being dismantled, disbanded, refashioned and reconstructed: career paths are no exception. The early signs date back a couple of decades when HR departments suddenly sought to emancipate employees from organizational dependency, with programs that encouraged them to *own or manage your own career*. Apparently, up to this point, employees had failed to do so.

The concept of a career path may well have run its course though, unless that path has many branching side-tracks as well as junctions that lead in entirely new directions. Career mobility has always been a two-sided equation between the employer and employee: the employer presents the pathway options and the employee pursues and secures those of interest. In the digital era, workers are taking a much stronger stand in their career pursuits and the paths may not exist with their current employer or industry at all.

A study by Bersin by Deloitte reviewed the career management practices of more than 50 organizations in an attempt to derive a best practice approach to modern day career management. Their findings pointed to no single best approach, rather a framework that reflected the differing maturities, demographics and cultures of organizations and their employees:¹⁰⁴

- *structured* career management, characterized by well-defined career paths aligned to the organizational structure
- *flexible* career management, in which career paths are somewhat defined but can accommodate individual variation based on development needs
- *open* career management, which facilitates career journeys via project-based work, active internal mobility and personalized development, and
- *transitory* career management, characterized by task-based work and development driven by individuals that organizations engage on a contracted basis.

Management thought leader Charles Handy wrote compelling works forecasting radical change in how we live, how organizations function and what work would look like in the future. He envisioned, and coined, *portfolio careers* long before that became a mainstream concept. It would take a seismic shift in leadership mindset, organizational structure and employee expectations to accommodate such change: a shift that has really only gained traction and become a reality in response to the disruptive forces we have unleashed in the digital age.

Already today, and even more so in the future, the concepts of *portfolio* and *plasticity* will be used to describe how we approach the topic of careers.

- *Portfolio*: workers will have multiple jobs throughout their career (including paid work, volunteering and continuous learning) as well as multiple employers (in both the fixed and on-demand employment markets)
- *Plasticity*: workers will re-skill and reinvent their careers several times over, following multiple interests and enabled by open access to learning and work opportunities around the world.

The principles of portfolio and plasticity are the cornerstones of talent mobility. On a progressive career journey that could span 60 years, workers will pursue mobility on a number of levels:

- moving between jobs within an organization in pursuit of lattice or ladder career opportunities
- moving between employers and industries to broaden their experience and contacts
- moving between modes of employment (permanent, contract, freelance) to manage flexibility
- geographical moves that support life and/or career goals.

And the centerpiece of talent mobility is flexibility. Today's workforce is seeking the freedom to choose their experience of work: the type of work they do, where, when and how work gets done and with whom they work.

Flexibility cuts both ways

*"Increasingly, we are looking for a fluid workforce in an entrepreneurial society where the face of work is changing fast."*¹⁰⁵

Eileen Clegg
Founder & Principal, Visual Insight

The advent of consumer technologies has put once unimaginable online access into the hands of everyone. Correspondingly, it has also developed familiarity and an impressive level of technological proficiency in users – self-initiated and without the requirement of formal training. Enterprises have had to put zero effort into developing this capability. That said, Gartner estimates that “by 2018, 30% of organizations will formalize digital literacy strategies to improve business outcomes and employee engagement.”¹⁰⁶

As it turns out, these skills are precisely the foundations of the digital workplace and it stands to reason that digital competence must keep in step. Chances are your organizational capability for organically developing this level of competence will be outstripped by the speed with which you will require it. Enter the contingent workforce.

Estimates of the size of the gig economy vary widely – between 10% and 40% of workers depending on the source. But one thing is clear: the trend toward independent work is growing, and at an accelerated pace. A number of factors are fueling this trend.

From an employee's perspective:

- job lay-offs resulting from business downsizing, offshoring and outsourcing have forced employees out of traditional employment relationships and crushed the concept of job security
- increasing entrepreneurial spirit and the perceived opportunity for higher earnings as a self-employed worker have attracted talented individuals
- demand for flexible working arrangements have shifted away from the attractiveness of traditional modes of work
- the new demographics (50% Millennials in the workforce) have changed expectations of work
- ‘because I can’ – technology devices and platforms have created the infrastructure to source and deliver freelance work.

From a business perspective:

- machine algorithms are becoming more accurate identifiers of specific skills and talents, and a faster channel to supply markets to source them
- the need for business agility and cost management lends itself to supporting flexible modes of work delivery, upscaling and downscaling labor as required
- the *war for talent* flags resource scarcity for specific skills in specific locations where the source-pool of talent is finite and small. But if you can reframe your expectations from ownership to sharing, then the talent available has few boundaries and becomes abundant.

Flexibility, it seems, appeals to everyone. With technology-enabled power and digital skills in hand, workers are now questioning whether they want to join the ranks of *employees* at all.

Going it alone – to freelance or not?

*"The Gig Economy is a wonderful term that makes lower employment security and stability sound sexy."*¹⁰⁷

David D'Souza
Head of London & Engagement Branches, CIPD

For many who are tired of corporations behaving badly, or feel trapped in workplaces that fail to deliver on the employment promise, or just have an insatiable entrepreneurial spirit and passion to achieve, self-employment presents a potentially viable alternative.

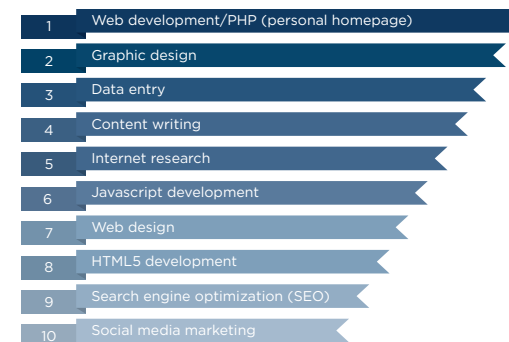
Freelancing, *prima facie*, embodies many of the employment attributes that talented players are seeking: autonomy, flexibility and variety. It also represents the antithesis of many traditional workplace detractors: micro-management, rigidity and structure.

Freelancing is frequently, if somewhat romantically, touted as a panacea for jaded employees or up-and-coming Millennials, and employment trends certainly appear to be tipping in this direction. Now more than ever, Internet platforms and marketplaces make freelancing a real possibility, matching skills with tasks and creating a vibrant, transparent source of work without geographic boundaries or regulatory constraints. However, the *free* in freelancing may be seductively ambiguous:

- *free*, as in root of *freedom*, meaning you have the power to determine your own activities without external controls or interference; **yet**
- *free*, as in opposite of *paid*, meaning you often do a lot of work for little compensation or you have a lot of free time between one contracted assignment and the next.

The lack of an effective safety net, the absence of employment benefits and rights, and the vagaries surrounding employment continuity, have raised more than a few concerns about jumping on the independent worker bandwagon. In the U.S., where freelancers represent 35% of the workforce, as well as in Canada and the U.K., freelancer unions are gaining traction and membership as they seek to support independent workers by lobbying for portable benefits and creating community networks of on-demand workers.¹⁰⁸

Top 10 Freelance Job Skills in 2015



Source: Upwork.com

Not surprisingly, technology-based jobs dominate the popularity charts in the freelance sector. Increasingly however, a broader range of skills is being delivered via this on-demand community, including customer service, electrical engineering, tutoring, copywriting, sales and marketing, branding and public relations, administrative support, translation services, legal services and photography, to name a few.

For HR, the increasing use of freelancers to complement hard-to-source skills or just to have contingent workers on tap, presents a significant workforce planning and talent management challenge. Gartner estimates that by 2020, 60% of organizations will use a unified talent management strategy for their entire workforce – freelancers, contractors and employees.¹⁰⁹ That will be a bare essential when workforce composition becomes increasingly complex due to the multiple and diverse modes of engagement with the organization.

Science, Body and Brain

It's not just technology, but also the sciences, that are dramatically changing what we know and understand about human behavior, performance and productivity. Through the life sciences and neuroscience, we have learnt considerably more about our physical and cognitive abilities, as well as their limitations.

It's biological

"There has been a revolution in medicine: it involves recognizing the interactions between the body and the mind; the ways in which emotions and personality can have a tremendous impact on the functioning and health of virtually every cell in the body."¹⁰

Robert Sapolsky
Author: *Why Zebras Don't Get Ulcers*

In his seminal work, *Thinking Fast and Slow*, author Daniel Kahneman draws a clear distinction between the two very different, yet highly integrated, modes of human brain processing:

- Thinking *fast* is a function of our evolutionary limbic brain hardware: it represents stored information, experiences and reactions that derive from our own life experience, but also the millennia of human evolution. It is intuitive, automatic, unconscious and operates with parallel processing capabilities that enable rapid response.
- Thinking *slow* is a function of the more recently evolved prefrontal cortex, and represents the superior human capabilities that differentiate us from other mammals, such as critical thinking, creativity and self-discipline. It is conscious, procedural, controlled and processes information in a logical, serial stream.

The vast majority of our thinking each day is *fast*. That means conscious effort via detailed analysis and interrogation is actually minimal. What feels like *thinking* is, for the most part, an elaborate illusion that makes us think we're thinking, when in fact our responses and actions have been determined subconsciously milliseconds before they surface to our awareness.

The inevitable debate about the existence of free will is another topic altogether and out of scope here, but suffice to say that much of our cognitive effort goes toward filtering, evaluating, validating and controlling (often inhibiting) the lightning fast reactions of our old brain to every scenario and interaction we find ourselves in.

This dual processing framework characterizes the brain in action and numerous poignant insights have emerged from the field of neuroscience:

Daily cognitive capacity is limited and depleted by use.

Anyone who has ever described themselves as metaphorically 'brain-dead' at the end of a workday – *and who hasn't?* – will relate to this. The state of mental exhaustion many experience comes from taxing the limited resources of your working memory – part of your *slow* thinking cognitive infrastructure.

The symptoms are fairly clear: vague attention, poor concentration, procrastination, reduced tolerance, tiredness, lack of interest.

The causes may surprise you.

- *Constant or repeated distractions*: the continuous redirection of your attention from this email to that conversation to a meeting notification, a telephone call, another email, a second conversation and so on, is mental gymnastics – and tiring. There are switching costs between each activity that accumulate and deplete your daily cognitive limit. What's more, rebounding from distractions can take several minutes each time due to a psychological refractory period in which the brain hits a processing bottleneck as it reorganizes itself from task to task.¹¹
- *Making decisions*: another sure way to burn up brain fuel is to be making many decisions, particularly if they are difficult decisions or involve people. Every decision involves the weighing up of alternatives – itself heavy-lifting – and then deciding between them. While some decisions are more challenging than others (choosing between fish and steak for dinner versus retrenching Jack or Jill), each decision makes the next one more difficult. Studies have shown a beneficial effect of increasing glucose intake to top up brain energy, but that comes with its own consequences and provides only a short-term respite.
- *Controlling impulses*: it's like wrestling an elephant. Automatic impulses emanate from the *fast* limbic brain system and may be loaded with emotion or deeply entrenched beliefs and habits. This system has vastly greater cognitive capacity than the *slow* thinking prefrontal cortex which must consciously rally a mediating response to these instinctive 'snap' reactions. That's hard work. The discipline of self-control is distinctly human and draws on higher evolved brain regions than found in other mammals. It effectively acts as a 'braking system'¹² for primitive impulses, but comes at a cost – it wears thin when repeatedly activated, leaving us feeling mentally exhausted at the end of a day.

Multi-tasking is a productivity paradox.

It's not a very popular statement in our always-on, always-scanning, super-sensory world, but *multi-tasking does not work*. Sadly, in the 40,000 years of human evolution, there has been no precedent, and therefore no preparation, for the information tsunami we have propagated in this past hundred years.

Technically, multi-tasking is referred to as *dual task interference*. As it implies, any secondary task attempted concurrently with the first, interferes with performance – on both. Try it yourself: read this page while you are watching a video and then review your comprehension. The accuracy of your recall will plummet by as much 50%. Even adding a physical task, such as walking on a treadmill, rather than a cognitive task, will reduce your performance by approximately 20%.¹¹³ Countless research studies yield consistent results – some people are marginally better multi-taskers than others but, as a species, it's not our strength.

Proponents of multi-tasking (incorrectly) claim that it makes them more productive. Yet distractions and switching between tasks has been shown to double the time it takes to complete a task. In one workplace study, participants showed a median duration of focus on any computer screen of just 40 seconds, with some workers displaying personality traits that likely make them more susceptible to distraction, namely neuroticism, impulsivity and urgency.¹¹⁴

While somewhat unfashionable, single-tasking (aka mono-tasking, uni-tasking, focus or concentration) is making a quiet resurgence as frustrated and mentally exhausted people everywhere begin to appreciate that completing one task effectively beats sub-optimal execution of multiple tasks, every time.

Social needs are deeply rooted in our brain architecture.

It's hard to overestimate the importance of social connectivity – yet we do, all the time. Nature has performed a premium job of evolving the human brain with the structures that ensure our survival, and social belonging is at the core. What chance of survival do you give any human infant without dedicated care? Consequently, we have an innate acuity and sensitivity to all things social: how we are perceived by others, whether we feel we belong to a group, our status or standing in that group, and our ability to accurately interpret the motives, and even predict the intentions, of others.

In the workplace, this undercurrent of social needs manifests itself in many ways. It makes us:

- intuitively seek out 'friends' who share our values and beliefs and with whom we want to engage

- read meaning into the cues we receive from verbal and nonverbal interactions
- seek out opportunities to collaborate, work in teams and share experiences
- compete with others and rank ourselves in the workplace pecking order
- celebrate individual and team successes
- revel in praise, encouragement and recognition
- shield ourselves from negative feedback and perceived threats.

The brain circuitry that enables us to perform all this processing is complex and broadly distributed. However, two neural networks have been isolated as key contributors to these abilities: the mirror neuron system, which is activated when we undertake or observe others undertaking physical actions, and the mentalizing system that is activated when we try to infer the motives or thoughts of others.

The mirror neuron system is considered to be part of our *fast* thinking brain architecture: we automatically empathize with others close to us by observing their behavior. The mentalizing system is part of the *slow* thinking architecture that requires conscious thought, analysis and interpretation.¹¹⁵

These systems are constantly switched on and actively scanning and interpreting the social environment we are in. Combined, they feed sensory information into the brain that informs us about how safe, comfortable and included we feel, based on where we are and who we're with.

Storytelling creates context and meaning.

A naturally curious species, humans have used stories throughout history as a mechanism to communicate, socialize and learn. Storytelling is especially powerful because it allows the audience to dissociate from the present and their personal experiences, and transport themselves into the past, the future or view the scene through the lens of different actors.

Stories give voice to human dilemmas and how characters resolve them, much in the way that the brain threads together multiple disparate pieces of related and unrelated data and relationships, and integrates them to find answers and solve problems. Importantly, these solutions can be new or creative because they are framed in a social story. Ultimately, stories "offer a powerful window on alternate futures", broaden our perspective, make emotional connections and give voice to our reasoning.¹¹⁶

The bottom line is that organizations ignore the social needs of workers at their peril. People are highly sensitized to their social environment, consciously and unconsciously, and this significantly impacts performance, productivity and engagement.

Like the body, the brain needs maintenance.

‘Use it or lose it’ warnings about the brain, analogous to the maintenance through activity of muscles in the body, have gained widespread coverage and acceptance. Indeed, one effect is that it has spawned a brain training industry exceeding US\$1.3 billion per annum, despite there being no consistent scientific evidence that such activity improves fluid intelligence or is transferable beyond the training games themselves.¹¹⁷

But science has revealed numerous ways in which brain health can be maintained, and in fact, improved. Each is worthy of your attention and further exploration, but to summarize we will refer to the NeuroLeadership Institute’s *healthy mind platter*¹¹⁸ as a taster:

- **Sleep:** Critical to homeostatic restoration, tissue repair, memory consolidation and emotional regulation, sleep is an essential and often undervalued component of mental health. Sleep deprivation, in its acute short-term and chronic long-term forms, is all too prevalent in modern society – the ‘ideal’ 7-9 hour range of sleep per night is difficult to achieve for many. The good news is that studies are showing real benefits of shorter, frequent sleep periods that work around natural circadian rhythms of 90-minute sleep cycles. Even micro-naps of 10-20 minutes during the day can improve concentration and cognitive performance.
- **Play:** Hard science says we need to have fun, to play, to experiment with unstructured, free expression, and to laugh. Play is well accepted and practiced in childhood learning but often disappears off the radar in the adult world. Play allows us to try and test novel approaches, both physically and mentally, and most importantly, play is rewarding: it releases dopamine in the brain which gives us pleasure and reinforces learning.
- **Downtime:** This may be the ultimate luxury that few can afford: time to really do nothing. In terms of active outputs, downtime appears pretty unproductive – wasteful in fact. But therein lies the paradox. Brains actually need downtime – to rest, to process and consolidate data. Downtime can constitute anything that distracts the brain from goal-directed activities. Take a leisurely walk, listen to music, have a bath or flick through the pages of a magazine. It facilitates the unconscious integration of ideas and information, the conditions necessary to create moments of insight – aha! moments – by giving the brain the space to tap into its unconscious resources.
- **Mindfulness:** Different to downtime in that this is a proactive brain state, mindfulness intentionally aims to induce alpha brain waves that both relax and focus the mind, and facilitate creative and divergent thinking. Mindfulness meditation has grown enormously in popularity and many guided meditation sites and apps, such as Headspace, Calm and Zen, train users in short, easily applied meditation sessions that build this capability over time.

- **Relationships:** We have already highlighted the importance of social connections for our well-being and success. Neuroscientists have established that poor social relations and social rejection cause ‘social pain’ – felt and interpreted in the brain similar to the experience of physical pain. Social experiences have well studied and documented impacts on the body’s cardiovascular, immune and endocrine systems, all of which can suffer in the absence of social support networks.
- **Exercise:** Put the brain game away and get on your bike! Physical exercise is obviously great for the body but also surprisingly good for the brain. Exercise increases blood flow and oxygen to the body and brain and this enhanced metabolic effect is crucially important for increasing cognitive functions such as working memory and response speed. It enhances learning and accelerates the release of brain-derived neurotrophic factor (BDNF) which is essential to neurogenesis, the growth of new brain cells.
- **Focus:** The antithesis of multi-tasking, focus requires undivided attention on an activity or immersion in a task. Focus requires considerable self-control – distractions loom constantly. Lack of focus can come from either of the extremes on the optimal arousal spectrum: boredom or stress. We achieve peak performance when we are centred on the optimal arousal curve, where we experience a balance between being engaged and challenged by a task, but not overwhelmed by it.

The healthy mind platter helps define how our daily experiences and activities impact the body and brain. Workers do their best work when they have these platter items in check.

Cognitive assistance is coming

"Aliens didn't come down to Earth and give us technology. We invented it ourselves. Therefore, it can never be alienating: it can only be an expression of our humanity."¹¹⁹

Douglas Coupland
Novelist and Artist

If the brain is beginning to sound rather high-maintenance to you, and has structural shortcomings that seemingly no amount of attention and therapy is likely to overcome, don't despair. Help is on the way!

"Hey Siri"

"How can I help you?"

"How intelligent are you?"

"I guess you'll have to be the judge of that."

"Seriously, how intelligent are you?"

"Interesting question."

Interesting indeed.

As technology capabilities continue their limitless expansion, the cracks in human intelligence – at least in terms of the type required for logical reasoning – are beginning to show. Despite all the astoundingly awesome and yet-to-be-understood qualities of the human brain, the pace and magnitude of change in the digital era is exposing its struggle to keep up – evidenced by the level of confusion, fatigue and fear in the daily experiences of many.

With some noted irony, the technology that is arguably the cause of this exhaustive state is also the likely source of its cure. Cognitive assistance, via virtual assistants, is here, and growing in a series of waves.

First wave. Interactive artificial intelligence is already in the palm of our hands. Smart, voice-activated virtual assistants like Siri and Cortana are setting your alarms, finding restaurant options for dinner tonight, booking your dog into the kennel, telling you the time in Auckland, how to say kennel in French, and when it is next most likely to rain. Little labors that could have taken half an hour out of your day, completed in seconds. Racing through the Internet, these apps will answer almost any question, or find online sites that can. Siri and Cortana have a broad level of general

knowledge and are very handy, but are unlikely to address specific workplace information needs that require subject matter expertise.

Second wave. Here, intelligent apps will be tailored and relevant in commercial enterprises and augment the capabilities and efficiency of technical professionals by putting the Internet to work in deep subject matter domains. There's ROSS, for example, the AI lawyer that uses natural language and pattern recognition to assist human lawyers find appropriate citations from thousands of volumes of law to support their cases, and has a 79% accuracy rate of predicting verdicts.¹²⁰ Or, of course Doctor Watson, IBM's application of its deep learning AI technology that is devouring hundreds of thousands of medical records attempting to become the world's best diagnostician. More and more, expect to see technical and professional capabilities augmented and enhanced by machine learning.

Third wave. Now it starts getting a little creepy. The technology is no longer 'out there' – on a device or in a robot – but 'in here', in your brain. Brain augmentation, cognitive assistance, human enhancement. Brain chip implants that vastly improve cognitive processing speed, capacity and memory. The convergence of biotechnology, nanotechnology and information technology is enabling an integration between science and technology that promises (or threatens) to leap to a whole new level.

As discussed in Chapter 2, we have already made extraordinary advances in the physical enhancement of the human body with the development of devices such as organ implants and prosthetics that enhance damaged or destroyed body parts. Incredible and confronting as these are, they have gained widespread acceptance for the most part and certainly improved the lives of many thousands of people. Why not extend these enhancements to our thinking abilities?

If you were offered a nano-chip brain implant that instantly made you smarter, would you accept it? Or one that allowed you to remain alert and active 24/7 without sleep? When do we go too far?

Despite their popularity in science fiction adventure films, most people remain uncomfortable with the idea of alien gadgets embedded in their brains, even on the promise of super-human capabilities. A survey by the Pew Research Center found that 66% of Americans would have significant concerns about the availability of such technology, many of whom fear a more unequal and divided society would result.¹²¹

As neuroscientists have used functional magnetic resonance imaging (fMRI) technology to study the brain in action, so too have computer scientists used models of brain functioning to build smarter computers. Brains and computers both use electrical signals to transfer data. A deeper understanding of the brain's parallel processing capabilities via its vast and

intricate neural networks has allowed serial computer processing to be reimagined.

Your augmented brain could be like housing a smartphone in your head. No need to learn most things we currently acquire through education and continuous learning: all digital information would be immediately available to you and regularly updated to keep you on the most current version.

It's not available today, but the foundational capability, albeit embryonic, is already in development. Understanding the long-term implications, and resolving the ethics around the ultimate use of such technologies, is not.

Fourth Wave. Who knows. By this point, super-intelligent computers are designing the next generation of even more super-intelligent ones. Human consciousness might exist outside the body altogether, and beings become immortal. Too much information?

The possibilities of enhancing human cognition are considerable: they are also highly probable given the current directions of science and technology. In the near term, we can expect many more second wave developments that will continue to excite and delight us.

For the longer term, we have some challenging questions to answer.

An Ecosystem of Talent

Repeat any action or thought pattern often enough and a habit will form. For the better part of the last fifty years we developed and nurtured a competitive mindset about the workforce until it became a habit: *talent is a competitive advantage – you must have more of it than your rivals in order to win.*

By the end of the 20th century, this narrative became entrenched and we were convinced it had morphed into outright warfare: *there is a war for talent, and we must prevail, or die.* On the battlefield, the annexed lands on which you can hoist a flag and claim 'ownership' are the measure of success. A similar mindset has dominated our approach to the workforce – we have laid claim to employees as the organization's owned human capital – similar to the ownership of operational resources such as plant and equipment or financial resources.

That will not cut it in the future of work, for three reasons:

1. human 'assets' are messy and not comparable to other business assets
2. technology is enabling an entrepreneurial spirit that challenges traditional employment paradigms, and
3. power is shifting from institutions to individuals in every realm, including the labor market.

In a world that is defined by vehement change and uncertainty, why would organizations even desire a workforce that is comparatively rigid in structure and capabilities? Can a business be truly agile, responsive and constantly innovating with a 'permanent' employee headcount? Equally, the desirability of long-term employment in a job with a single employer is waning with the advent of multiple and broad options.

Ecosystem
Any system or network of interconnecting and interacting parts.

People have always thrived in mutually dependent communities: sharing knowledge, experience and learning. Civilization has expanded and progressed on a global web of interdependence, the hallmark of an integrated ecosystem.

Biological and environmental ecosystems function cohesively due to the co-dependence of all the elements in them. When the ecosystem is in equilibrium and harmonious, all its constituents collaborate and thrive. In the business ecosystem, there are many interconnected players: the organization, its suppliers, customers and competitors, and its talent pool. But the business world is driven by competition rather than collaboration.

Part of the social and economic change that the digital age may bring about is a reformation of this competitive business dynamic – after all, if the labor market is global and mobile, competing for ownership of talent

becomes a zero-sum game. Existing business models are being challenged everywhere. High-tech industries are at the forefront of the metamorphosis and are reimagining the relationships and interdependencies that are critical to their success.

It has been suggested, for example, that cross-organizational job sharing and joint training and development that invests in building the entire ecosystem’s stock of talent, may be a more productive way to think about, and plan for, human capital needs in the future.¹²²

We are coming to terms with the new reality of the digital world. Part of the challenge has been a lack of fluidity in both the business mindset and business infrastructure. Minds are already changing, as is evidenced by the transformation in workplace expectations. And the infrastructure is starting to follow.

Digital platforms pave the way

Facebook, Amazon and eBay are more than technology applications: they can be viewed as employment platforms. They create direct income opportunities for advertisers, publishers and retailers but also indirect employment through the ecosystem of ancillary services associated with them.

Common Platforms in the Gig Economy		
Sell your Stuff	Sell your Time & Skills	Lease your Assets
Amazon Ebay Etsy DaWanda Alibaba	Uber Lyft Freelancer TaskRabbit Upwork Thumbtack Didi Chuxing	Airbnb HomeAway BlaBlaCar Getaround

In an ecosystem of talent, platforms create open marketplaces that individuals, rather than organizations, access to exchange their goods and services for income. Digital platforms simplify demand and supply by matching skills and services and thereby amplifying the speed and efficiency with which buyers and sellers can transact.

On digital platforms, the focus shifts from commanding resources and controlling assets to coordinating them across the ecosystem. It is the platform’s community and their extended resources that generate value in the chain. Even the one-to-one relationship organizations seek to have

with their customers is expanded to put the ecosystem at the center of importance.¹²³

The economic benefits of digital platforms will likely see their greater integration into the overall employment landscape – something regulators and traditional industries are currently grappling with.

Digital platforms open employment opportunities for:

- unemployed workers seeking to rejoin the workforce
- under-employed workers looking to supplement their income
- people seeking casual or short-term job assignments.

A study conducted by McKinsey Global Institute¹²⁴ across the U.S., the U.K and E.U. identified 162 million ‘independent workers’. More than two-thirds are engaged in the gig economy by choice as free agents or casual earners and more than half participate to supplement their income. This study also highlights the broad diversity (gender, age, education and income) of participants, and debunks several common myths about the gig economy, such as:

- *that it is dominated by Millennials* – in fact, under 25 year olds represent only one quarter of participants
- *that it is populated mostly by low income workers* – in fact, less than one quarter of participants represent low income households (except for Spain where 39% are low earners)
- *that it predominantly facilitates low to moderate skilled work* – in fact, there is a strong representation by high skilled professionals, including doctors, lawyers, accountants, interior designers and writers.

Despite the noise and media attention frequently surrounding digital platforms and their potentially detrimental effect on traditional modes of work, the gig economy is alive and vibrant, even without them. It is estimated that, overall, only 15% of independent workers currently use digital platforms to source their work. But we have only just commenced this journey and all indications point to the growth, quite quickly, of this new market sector.

Diversity at work

An undeniable and welcome feature of the future workforce is its diversity. Keyword is *future*, as most practitioners specializing in this field would attest that progress has been hard, slow and, to date, insufficient.

That’s despite empirical data coming from every direction, consistently reinforcing the value of heterogeneity in the workplace, whether it be measured by financial performance, strategy, innovation or leadership. Crafting a diverse workforce is smart, not just in concept, but in outcomes. Given challenging problems to solve, teams comprised of people from

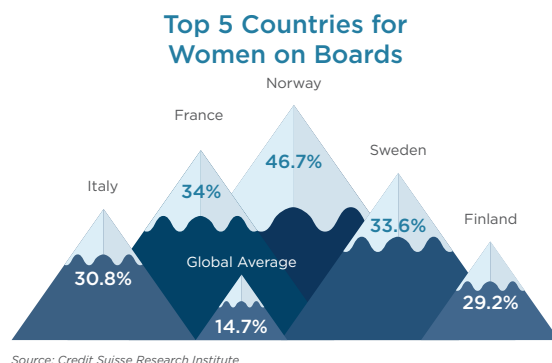
diverse backgrounds and experience have been shown to focus more on facts rather than rely on their assumptions, process information more carefully and produce more innovative solutions.¹²⁵ The divergent thinking generated in heterogeneous teams – and organizations – forces the active engagement of conscious thought processes that cut through comfort zones and heuristics when confronted with alternate ideas and opinions.

Here we scan three pillars of diversity: gender, age and ethnicity.

Gender

In a landmark study of large global companies, Credit Suisse Research Institute published some interesting findings on the state of gender diversity around the world.¹²⁶ Despite the focus and efforts of the last decade to rebalance the gender makeup of both the boardroom and the C-suite, the average global representation of women on Boards remains at just 14.7%, and women in senior leadership positions account for just 13.8%.

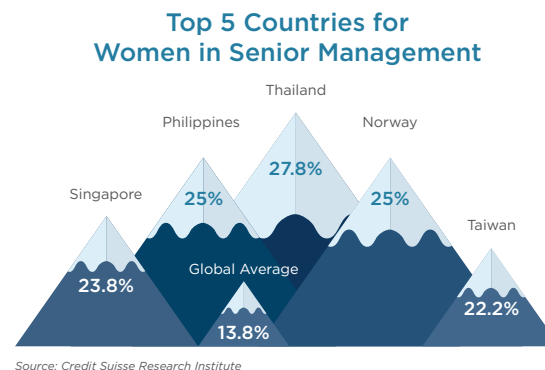
In this data set, only 61 of the 3,380 companies (1.8%) had a 50% or higher representation of women in their senior management ranks. Yet these “50%+” companies unequivocally outperformed the group on measures of return on investment, leverage and dividend payout ratios, as well as overall share price performance.



Some additional findings include:

- companies with at least one female Board member enjoy an average 3.5% higher compound annual growth rate, *yet less than 15% of companies have such diversity*
- Europe leads the way with female Board representation overall at 24.4%, an 80% increase over six years, *as a result of the introduction of quotas and targets*
- globally, women make up just 3.9% of CEOs and 14.1% of CFOs, *despite over 40% of U.S. MBA graduates being female*
- globally, women make up 9.9% of business unit heads, *growing at a rate that will take until 2070 to reach parity with men.*

Many explanations have been offered: women tend to prefer more flexibility than traditional senior executive roles allow; they are highly successful as entrepreneurs in small to medium businesses; organizational cultures favor male styles and preferences. However, the World Economic Forum finds that the primary barriers to hiring and promoting women are *unconscious bias among managers, lack of female role models, lack of qualified incoming talent, women's confidence and aspirations, and lack of work-life balance.*¹²⁷



McKinsey & Company research also highlights unconscious bias as a key consideration in the stalled progress of gender diversity in the U.S. workforce and notes that at present rates, it will take over 100 years to reach gender parity in the C-suite. Their study also notes that women have a higher propensity to take staff roles (such as IT, HR and strategy) over line roles (such as sales, marketing and operations) and that line roles more typically ascend to executive positions, and ultimately the CEO. Additionally, a disconnect between the high importance that HR places on gender diversity policies and programs versus the significantly lower importance placed on them throughout the business leads to low rates of adoption and action.¹²⁸

Many of these are addressable issues. Indeed, leading organizations have them high on their agenda. It's hard to ignore the business case for increasing gender diversity, but it appears equally hard to move the needle on greater female participation. Perhaps it will take a generational shift, which is timely, because that new generation is here.

Age

Let's spare ourselves another recital on the differences between Millennials and their predecessors and cut to the chase: people are different and one-size-fits-all leadership doesn't work, no matter what your age.

The workplace reality today is that leaders are highly likely to work within and across teams that have a multigenerational representation – from Veterans to Boomers, Gen X and Y, and within the next decade, Gen Z. This will only be exacerbated by the lengthening of our life spans leading to an

extension of our ‘work span’ – simply, more people will stay in the workforce longer.

That values and beliefs vary across generations is to be expected: each generation is influenced by the social, political and economic circumstances of its time. These will also be apparent in the workplace, together with different skills and experiences that representatives of each generation bring to the table. Consequently, adapting and tailoring workplace aspects such as training and development, for example, can increase employee adoption and uptake, leading to better effectiveness and productivity.¹²⁹

That said, today’s leaders are confronted with so many models of effective leadership styles it requires quite some mental contortions to wrap your head around which type of leader you should be: visionary, situational, participative, transformational, affiliative, blue ocean and so on. Rather than add to the noise, we have distilled from this variety of styles, three critical traits (3 C’s) that consistently underpin effective leadership, irrespective of the age of your audience.

3 C’s of Multigenerational Leadership

CONNECT

Make personal connections with people, connect them with each other, and connect them with the organization and their role in it.

- Link people and purpose – make it meaningful
- Set clear goals and boundaries
- Communicate directly and honestly
- Demonstrate compassion and understanding
- Lead by example
- Praise and reward success
- Encourage fun in the workplace
- Promote the organizational culture and values

COLLABORATE

Leverage the social fabric of human interaction by facilitating collaboration within and across groups.

- Take a collegial approach
- Draw on and value diverse ideas and approaches
- Invite participation and contribution
- Let team self-leadership thrive
- Empower creative teams and individuals
- Unify diverse or remote groups
- Show appreciation for effort and results
- Foster mentoring across and between generations

CHANGE

Promote progress and innovation by fostering a safe and inclusive environment that inspires and rewards.

- Be agile, flexible and open-minded
- Allow experimentation and customization
- Respect individual differences and change-readiness
- Support personal learning and growth
- Involve others to lead and manage change
- Coach people through change
- Shine the spotlight on wins and progress
- Honor and role-model work-life balance

The skills that managers and leaders need to hone in order to connect with their multigenerational workforce center around social and emotional intelligence. These skills transcend generational differences: they enable

effective communication, knowledge transfer and encourage divergent thinking. In addition, they facilitate respect for diversity, enhanced teamwork and the control of toxic behaviors.¹³⁰

Ethnicity

Cultural differences present us with a myriad of opportunities and challenges. International migration now sees most Western and many emerging countries with culturally diverse populations, and consequently workforces.

The benefits are numerous, from fresh thinking and approaches to a variety



Source: Culture Trip

of experience and learning, not to mention the rich addition of food, music, art, fashion and religion sourced through multicultural diversity. Unfortunately, the same differences can cause difficulties in acceptance, assimilation, tolerance and equality.

In the workplace, ethnic and cultural diversity is becoming even more prevalent due to the increasing cross-border interactions of multinational corporations with their affiliates around the world, global competition and employee mobility. That means effective leadership and teamwork necessarily require the skills to value and adapt to cultural differences to leverage their potential and contribution.

Researchers have studied cultural differences, and their manifestations in society and the workplace, for many decades. From social

Hofstede’s Culture Dimensions

- individualism v collectivism
- power distance
- uncertainty avoidance
- masculinity v femininity
- long v short term orientation
- indulgence v restraint

psychologist Geert Hofstede's pioneering work distinguishing the characteristics of Western versus Eastern populations,¹³¹ to more recent work by cultural neuroscientists in the field of cultural intelligence,¹³² the recognition that cross-cultural differences require awareness, understanding and adaptive behaviors is undisputed.

Apart from the observable differences that are clear when working in teams with multicultural representation, biological variations have also been identified and shed further light on the source and manifestations of these differences.

For example, studies have shown variations in the molecular structure of the neurotransmitter serotonin which, in collectivist cultures, can present more often with a shortened allele form, correlating with higher levels of social sensitivity.¹³³ Brain imaging studies show variations in prefrontal cortex neural activation of Easterners and Westerners. Whereas Westerners show a greater propensity to focus on object processing, Easterners focus on context and relationships.¹³⁴

This means that employees from differing cultural backgrounds literally see the world differently, and respond in keeping with their cultural norms.

Even the long-held belief that the six primary human emotions (happiness, sadness, fear, anger, surprise and disgust) are demonstrated with consistent facial expressions across all cultures has been debunked. Neuroscientists have shown that Westerners express these emotions using distinct facial muscle movements; Easterners on the other hand do not, and will use more intense eye movements instead.¹³⁵ Consequently there is plenty of room for error in interpreting the nonverbal gestures and expressions of people from a culture foreign to your own.

Given these real and perceived differences and the likelihood of more multicultural teams being a feature of the workplace, the development of competencies that support effective communication, team problem-solving and creative innovation are paramount. Leaders that master these skills will be better placed to motivate others and facilitate harmonious and productive multicultural teams.¹³⁶

With so many dynamic factors at play in the way people and relationships have changed, the need to develop the *soft* skills of cultural intelligence are just as critical as the development of *hard* digital intelligence. Truly successful people in the future workforce will neither be technical nerds nor social butterflies. They will be a balanced combination of both.

Championing Cultural Intelligence

*"When we learn to effectively and respectfully interact with people from diverse cultures, we strike a gold mine of opportunity for personal and professional fulfillment."*¹³⁷

David Livermore
President, Cultural Intelligence Center

Unlike digital intelligence and business intelligence, which center on understanding, learning and mastering the technical nuances of the workplace, cultural intelligence calls for a fundamental comprehension and appreciation of human nature.

It behooves each of us as individuals to develop this capability in order to foster effective and rewarding relationships in all aspects of life. In leadership roles, it signals the maturity gained through life experience and exposure to a diverse range of people, places and situations. The components of cultural intelligence outlined in Chapter 1 call for advanced skills:

- *social and emotional intelligence* require recognition and acknowledgement of the perspectives of others, empathy in interactions with them and the ability to quickly adapt, accommodate or diffuse difficult encounters;
- *cross-cultural intelligence* requires an authentic appreciation of cultural differences, curiosity to explore and learn from them and a willingness to harmonize and adjust in unfamiliar territory;
- *organizational intelligence* requires acute sensors to interpret overt and covert signals in the workplace that can significantly impact relationships and work outcomes.

When mastered, these skills easily differentiate the best leaders from the rest. Insufficiently or ineptly applied, they can undermine the effectiveness and success of leaders, regardless of their technical aptitude or business prowess.

It may be tempting to point to leading world figures who, in recent times, have shown a flagrant disregard for some or all aspects of cultural intelligence. Powerful, yet in full defiance of the civil liberties that have evolved as social and political norms over the last century, such figureheads have ridden a wave of discontent and disillusionment with 'the establishment' in countries around the world, often espousing ideals of a bygone era and promising to restore that which has been lost to progress.

But divisiveness, blame and intolerance create an unsturdy platform for modern living. We have never needed cultural intelligence more.



Boot Camp: Cultural Intelligence

Gloves on!

Getting the people equation right is more challenging than ever. Relationships between workers and employers have been rebooted and new rules apply. Choice, diversity and meaning underscore the changes. What can HR do to support the development of their organizational cultural intelligence (CI)?

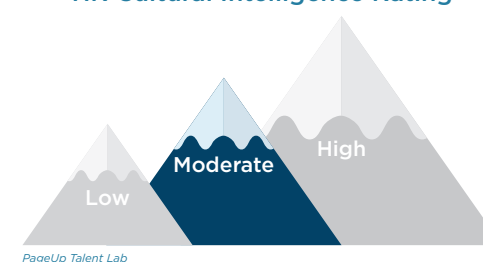
In the CI Boot Camp, we consider three phases for organizations and HR to address:

- **Warm Up:** preparations that should be undertaken now
- **Work Out:** activities that enhance the organization's cultural footprint
- **Wind Down:** legacy approaches that should be grandfathered.

What we know

- **Trust and loyalty is low.** Institutions of every type – political and business organizations – have lost the commitment of their constituents and stakeholders. The backlash is being felt worldwide and in every context.
- **CI capability is lagging.** Leadership styles and skills are being tested by ever greater diversity and complexity in organizational environments. Few are shining role models of leadership in the digital age, and employee engagement remains weak and fickle.
- **Talent is taking back control.** Workers no longer rely on organizational employers to map their career paths or create their learning opportunities. Self-educated, mobile workers are choosing where to pitch their talents and are seeking employment that fits with their aspirations.

HR Cultural Intelligence Rating



What needs doing

Organizations and HR need to step back from the front line and determine where their battle-ground is. What change needs to occur to:

- how the **employment value proposition** is constructed and communicated?
- the HR processes and technology in the organization that support **leaders** to build productivity and engagement? and
- the career structures in the current workforce plan based on how they support both the organization's needs and workers' drive for **career mobility**?

CI BOOT CAMP

CI BOOT CAMP

Warm Up



Employment Value Proposition

- Reality-check your current EVP with internal & external constituents.
- Clarify your employment brand USPs to differentiate from your talent competitors.

Leadership

- Establish ‘trust in leadership’ as a critical success measure.
- Investigate technology tools that enhance productivity and engagement.
- Explore external partnerships in the talent ecosystem, such as training collaborators.
- Review your diversity and inclusion plan and status.

Career Mobility

- Review career mobility policies and practices for relevance and impact.
- Revisit your workforce plan considering portfolio work and career plasticity.

Work Out



- Address real or perceived shortcomings in your EVP.
- Craft an accurate, authentic & appealing employment brand statement.
- Refresh HR practices throughout the employee life cycle to align with the EVP.

- Develop a comprehensive engagement strategy, then retro-fit the measurement tools.
- Simplify the collection of engagement feedback; focus on action and accountability.
- Educate leaders on current neuroscience principles that underpin talent management.

- Proactively develop talent pools of contingent/on-demand workers.
- Invest in HR technology that enables effective contingent workforce management.
- Build career mobility measures into key performance indicators.

Wind Down



- Remove push ‘marketing-speak’ in communicating the employment brand.

- Remove toxic leaders that undermine the organization’s values and alienate talent.
- Eliminate engagement surveys that are form over substance.

- Discard inflexible policies and management practices that undermine career mobility.

Talent Lab 2

Has the war for talent become a crusade for engagement?

Top 10 Quotes from Talent Lab Contributors

“When a flower dies, we don’t blame the flower: we look at its environment. When an employee fails to meet expectations, we tend to find fault with the employee.”
HR Director – mining services organization

“Engagement is like Jello – we’re trying to nail it to the wall, but it just won’t stick.”
Thought Leader – U.S.

“Highly engaged teams have fun, they banter, they take on extra activities.”
HR Director – telecommunications organization

“Almost by definition, the more managers you have, the less engaged your employees are.”
Thought Leader – U.S.

“Intent before content: if the intent of an employee discussion is about recovery and success, then the content becomes less threatening.”
HR Director – retail organization

“Low engagement is a problem of poor leadership, not unmotivated employees.”
Thought Leader – U.S.

“We’re big believers in respecting the output of what you put in, not the time.”
HR Director – mining and refining organization

“Organizations need to stop doing engagement surveys and start building engagement strategies.”
Thought Leader – U.S.

“Engagement comes down to simple things like leadership, open and honest communication, and just saying thank you.”
HR Director – retail organization

“We stopped formally measuring engagement when the process itself became overwhelming; discouraging rather than encouraging.”
HR Director – law firm

For most of the 20th century, employers went to the employment market to hire workers for their enterprises. They advertised in newspapers, on billboards and latterly on electronic job boards, and selected from a batch of aspiring job applicants.

But toward the end of the century, the mood in the employment market began to change, until McKinsey & Company clarified what was going on. In the new knowledge era, acquiring the best ‘talent’ was an organization’s most critical success factor, and to get it, we had to go to war.

In fact, prior to this, the term ‘talent’ had scarcely made its debut in the corporate lexicon. Companies had staff, workers or employees. Talent was what you paid money to see on stage and screen.

But HR was quick on the uptake. Re-labeling workers as talent elevated their importance from being considered a costly unit of labor to that of strategic human capital. And just like financial capital, this resource was now in high demand, short supply and fundamental to the organization’s success.

The War for Talent was published as a book¹³⁸ by the McKinsey team in 2001 and since then the battle has raged.

What is becoming evident is that the war, if it can be called a war, is a war for *skilled* talent, not just any talent. And the higher the skill levels, the fiercer the battle. Advances in technology, requiring more sophisticated tertiary skills necessitate this, as does the automation of countless tasks once performed by low skilled workers.

What’s more, in the Talent Lab we wondered: by the second decade of the 21st century, had the short-term cutthroat tactics of talent acquisition that were the hallmarks of the war for talent, evolved to a more steady long-term focus on development and retention, the hallmarks of employee engagement?

The Talent Lab thought leadership think tank was put to work.

What engages you about work? More complex a question than it first appears. We did not ask “why do you work?” thereby eliminating most of the financial hygiene factors surrounding employment, such as paying for a roof over your head, the kids’ education or exotic holidays.

Talent Lab 2: Summary of Findings	
1	It’s about alignment, not happiness
2	Surveys are out of fashion
3	HR needs to produce business metrics, not HR metrics
4	Generational differences are overplayed
5	Technology is underrated
6	Performance and engagement are two sides of a coin

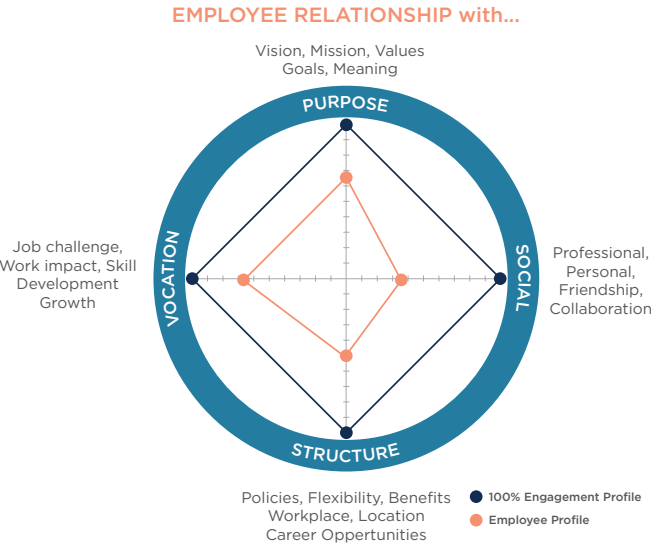
We will define employee engagement as the connection an employee has with their employer, as evidenced by their commitment and discretionary effort.

Months of research and discussions yielded the following results from this Talent Lab.

1. It's about alignment, not happiness

The answer to the question “What engages you about work?” drew a mosaic of responses. Predictably, no one sole factor explains what connects most people to their work: rather, we found that a unique *engagement profile* could be drawn for each individual based on the importance weighting of four distinct pillars of engagement.

PURPOSE	Alignment with the organization’s vision, mission and values, its goals and how these create meaning.
STRUCTURE	Alignment with the work environment: its policies, location, benefits, flexibility and career opportunities.
SOCIAL	Alignment with the people: professional and personal relationships with managers and colleagues.
VOCATION	Alignment with the work itself: job functions, challenge, organizational impact, skill development and growth.



Employees can plot a point inside the engagement zone for each of four pillars. In the example shown, the employee has a low alignment with the organization’s purpose, a moderate alignment with the structural and social elements of the workplace and a high alignment to the job itself.

In such a scenario, ensuring the work tasks remain stimulating and that the employee can seize opportunities for further skill development will be critical to engagement. There are also opportunities to strengthen the commitment in the remaining three pillars by gaining a deeper understanding of that employee’s needs.

Our research highlighted that

- each employee will have a unique engagement profile
- alignment with the four pillars is dynamic and changes over time
- not all four pillars are required to be at high levels of alignment to achieve moderate engagement (but at least one must be high)
- conversely, one pillar ranked very low can trigger overall low engagement.

What about happiness?

Given the choice, most people would rather be happy at work than not. That said, targeting happiness as your key measure of engagement is fraught with challenges:

- happiness is highly subjective and ill-defined in the work context
- individual happiness is influenced by many factors outside the work environment and is variable day-to-day
- happiness of itself is no guarantee of effective work outcomes.

We determined that, on the whole, happiness is an outcome that can occur as a result of alignment with some or all of the engagement pillars, but is not an input that can be effectively managed by leaders or managers in the organization.

Deficits in employee engagement can be addressed by focused action on the low rating pillars, but a task to ‘make employees happier’ is inherently difficult to action or measure.

2. Surveys are out of fashion

In the Talent Lab we referred to it as *measurement myopia*: a condition symptomized by a zealous drive to achieve a targeted engagement score supplemented by the general absence of sufficient action to address the causal factors. It has grown to epic proportions.

Each year, employers worldwide are shamed with the results of global engagement surveys reporting, once again, that employee engagement is low – very low. In 2016, the results came in at 32% employee engagement in the U.S. and 13% worldwide.¹³⁹ Worse still, the pattern has been almost flat for the past five years, despite the many millions of dollars and thousands of hours of effort spent to rectify it.

This prompted us to ask a few questions:

- Why do the results show no signs of improvement?

- If there is no impact for effort, why do we keep trying to improve engagement?
- Are the results *really* that bad?
- What are we missing in our understanding of what engages employees?
- Who has the greatest potential impact: Managers? Employees? The Organization?

The Talent Lab conversation about the measurement of employee engagement induced its fair share of passion and frustration.

Advocates pointed to the recurring demand from business leaders for more objective metrics coming from HR. The quantifiable measure of a factor (employee engagement) that has direct business impact (performance and productivity) is a valuable contribution.

Further, consistent year-on-year measurement provides both an internal benchmark (tracking improvements or deterioration in engagement scores) and an external benchmark (scores relative to industry or market) that provide real business insights.

That's if you can believe the numbers.

Thought leaders and HR executives agreed on some of the shortcomings of the well-entrenched methods of measuring engagement:

- lack of a clear definition of engagement resulting in long, boring questionnaires that aim to measure 'everything'
- lack of alignment with business outcomes
- gaming of surveys leading to data integrity concerns
- leadership lip-service to the importance of engagement
- the poor track record of organizations in actioning survey feedback.

And did we mention survey fatigue?

It's hard to fathom that nearly 70% of the U.S. workforce and almost 85% globally are not engaged or are actively disengaged from their work. Is it possible that if this is the answer, we are asking the wrong questions?

Growing skepticism about traditional surveys has certainly spawned new attempts to measure engagement: pulse surveys, exit interviews, mood monitors and appreciative inquiry workshops, to name a few. These are emerging in a similar trend to the transformation of performance management processes, from the annual cycle of prescriptive, backward-looking, judgmental appraisals to dynamic, real-time, constructive feedback conversations.

3. HR needs to produce business, not HR, metrics

Two steel tracks running parallel into the distance, never intersecting. On one track run the core business metrics: revenue, profits, growth, op-ex, cap-ex, customer satisfaction. On the other track, HR metrics: turnover, acquisition time and cost, employee satisfaction.

What is the relationship between the two?

Let's be fair. HR gets it: metrics are essential to both gaining a comprehensive understanding of what's happening with their workforce as well as providing data that business leaders can use to make projections and decisions.

It remains however, that there is a significant gap between what business leaders need and expect in terms of data and what they receive.

Never has there been so much data generated about the workforce. Sourced from core HR information systems, payroll systems and talent management systems, it is now possible to generate literally millions of data points on the human capital in your business. And you do.

The challenges are:

- *Skills*: applying the analytical nous to make meaning of the data
- *Focus*: separating the tactical from the strategic
- *Alignment*: data interrogation that provides business answers.

For example, many HR professionals report engagement scores or employee net promoter scores as strategic HR metrics – they are not. Strategic analytics enable foresight and decision-making. So unless the engagement score can be linked to specific business outcomes, it is just another data point and falls short of providing actionable business information.

Consider these two scenarios:

1. HR reports this year's engagement score is 77%, up from 72% last year and on track to reach the 3-year target of 80%.
2. HR reports this year's engagement score is 77%, up 6.9% from last year, correlating with the 5.4% increase in customer satisfaction and revenue growth of 4%.

Which would your business leaders prefer to hear? Scenario 1 still raises the question, *so what?* Scenario 2 answers that question.

When HR successfully syncs its metrics with the business' metrics, there will be no question about the function's value.

4. Generational differences are overplayed

If you're feeling exasperated by the barrage of commentary on the Millennials and advice on dealing with the generational differences in the workforce, you are not alone.

Nowhere was this more evident than in this Talent Lab, exploring workforce engagement. The default assumption appears to be that the lifestyle and attitudinal characteristics commonly attributed to the Millennials (impatient, confident, indulged tech-natives) carry over into their work personas, with the further assumption that this differentiates them from all other generations represented in the workplace: they are unique. This is not what we found.

The five consistently cited work elements that employees report as engaging are:

- *Flexibility*: in mode of work, hours and location
- *Autonomy*: accountable for their work and free from micro-management
- *Impact*: seeing their work have a positive effect on the company goals
- *Relationships*: working collaboratively with colleagues
- *Meaning*: caring about the mission and cause of the organization.

In the Lab, more so than in the literature, we found that these characteristics are pervasive across the bulk of the 21st century workforce. These elements of workplace engagement are, in fact, reflective of a societal shift in expectations of work, not a generational one.

5. Technology is underrated

It is virtually impossible to divorce the impact of technology from almost any aspect of work (and life) anymore, except apparently when it comes to employee engagement. Here, it appears, is the last bastion of human-to-human connection that is beyond the reach of bits and bytes. Not so fast.

What is the role of technology in employee engagement?

Most responses to the question suggested a minor, mostly administrative, role for technology in the sphere of employee engagement. Certainly, technology is credited with faster and more efficient methods for gathering and analyzing employee survey data, for instance. It has even spawned innovations in the measurement of engagement, such as pulse surveys and mood apps.

We noted dissension between executive HR practitioners and industry observers (analysts and consultants). The former see technology as a means of tracking and reporting engagement, the latter of influencing it.

Industry observers are more bullish about the engagement potential of technology. You only have to reflect on your own relationship with your smartphone or tablet to admit to the engaging lure of these devices. Rather than 'de-humanizing' the interactive experience, increasingly technology is augmenting and facilitating better connections between people.

HR tends to be more skeptical. Technology is viewed as a servant, not a friend. It has great processing powers, but finite limitations in comprehending complex human nuances. And let's face it, no heart. Inspiration in the workplace comes from a compelling vision and leadership, not machines. Perhaps for now.

6. Performance and engagement are two sides of a coin

Is there a cause and effect relationship between performance and engagement? That is, is a high performance environment also an engaging one? And is an engaging environment also a high performing one?

It can be, but unfortunately, the opposite can also be true.

Is it possible to drive high performance, say with above-market pay and heroic stretch targets, without the necessity for employees to feel engaged? Is it also possible to observe high levels of employee engagement without the commensurate levels of productivity, resulting in subpar organizational performance? Probably yes and probably yes.

At first it seems counter-intuitive, or perhaps we have bought into the argument that high performance is the automatic outcome of high engagement.

It is no doubt true in many circumstances that engagement and performance are two sides of the same coin. Highly engaged workers volunteer discretionary effort: they go beyond the job description to exceed expectations, create innovations and energize their colleagues. Equally, high performance can be the key factor behind engagement: people want to be part of winning teams.

In the Talent Lab, we found that this debate shifted depending on the organizational culture. It would serve HR well to continue to identify metrics that show tight correlations between engagement and performance – at both an individual and organizational level.

Culture – Your Killer App

Mollie Lombardi

Co-Founder, Aptitude Research Partners

Mollie brings a wealth of knowledge and experience in human capital and workforce management insights to help ignite a new conversation at the intersection of HR technology, strategy and impact.



Culture is a powerful force within organizations, but one that remains mysterious to many. And as hard as it is to define, it can be even harder to change. At Aptitude Research Partners, we consider culture to be the norms and behaviors that are rewarded or discouraged by the people and processes within an organization. How an organization communicates, what behaviors, skills and achievements it rewards, the work environment and “employee deal” of compensation, reward, and benefits, and even how it assesses talent, are all part of the culture conversation. So how do you build the “right” culture?

First, it's important to remember that there's no one “right” set of behaviors, or compensation package, or work environment that organizations should seek to achieve. What it comes down to is alignment. Do you have the right mix of reward, recognition, opportunity, feedback and communication that attracts the talent your organization needs to achieve your specific goals? Culture should be your killer app – the undeniable force that defines how you achieve your goals, treat your customers, and interact with each other.

Culture should be your killer app – the undeniable force that defines how you achieve your goals, treat your customers, and interact with each other.

It may be tempting to say “we need to build a culture” or “we need a change in our culture.” But as anyone who's ever tried to build or change a culture can tell you, you can't just muscle the culture you want into existence. You already have a culture, whether you know it or not. You can't invent it, but you can diagnose what your culture currently is, and then choose either to amplify the elements that are aligned to strategy and delivering business results, or change systems and processes to define and reinforce new behaviors. You can't change a culture, but you can use process and even technology to help change behavior.

So what can you do to make culture a competitive advantage that operationalizes your strategy to deliver results? Below are some key steps.

Diagnosis

Diagnosing your culture is important even if you think you already have a handle on your culture. Aptitude's 2016 culture study found that just 36% of organizations say that there is a cohesive view of their company culture, and that leaders and employees would describe it the same way. And only 32% say that leaders and employees hold each other accountable when they exhibit behaviors that are not aligned with the organizational culture.

If the culture doesn't reinforce aligned behaviors and discourage misaligned behaviors, it's hard to move everyone in the same direction.

Diagnosis of your culture is really about understanding if the policies, point of view, tools and systems you have in place to manage your workforce are truly driving desired behaviors, or if you are seeing unintended negative consequences. Culture reinforces norms and behaviors, and creates the default positions that inform every decision leaders and employees make outside of defined goals. If you have a strategic goal around being a low-cost provider, people operating your production equipment may be focused on ensuring efficient throughput and making all their scheduling and process decision around that. But if you don't have a culture of low-cost efficiency, other departments like maintenance or procurement might lack the same urgency, defaulting to functional priorities that have unintended consequences on product delivery. People may have good intentions, but if the culture doesn't reinforce aligned behaviors and discourage misaligned behaviors, it's hard to move everyone in the same direction.

Definition

Leadership can't stop at defining the strategy for the organization. Leaders must also define and clearly communicate the behaviors required to execute on that strategy. Don't assume people – leaders or individuals – know what behaviors are driving results. Consider a call center that set a strategic goal around customer satisfaction and put structures in place to shorten call and hold times. Reps and managers monitored, tracked, and tied incentive structures to their average times. And while their hold and call times shrank, so did their customer satisfaction scores. The behavior drove a culture that simply annoyed customers more quickly. To resolve it, they had to drive behaviors around call resolution instead of speed. Driving clear behaviors, and ensuring they are truly delivering results, is critical. Then it's up to the individual employee to take that understanding and use it to guide their daily behaviors and interactions. This is how behaviors drive a culture – and a culture change.

Deploy

When you have alignment and clearly defined behaviors, a strong culture defines the organization and becomes a critical factor in attracting and retaining the right talent. Again, there is no single “best” culture. There are simply cultures more, or less, aligned to company goals. When your culture is clear, candidates will often either feel at home immediately or self-select out. Take the example of an operator of health care facilities that deals with very sick patients coming in for treatments. It’s a tough job, often for fairly low wages. But they have built a culture of fun, caring, and belonging, and hold each other accountable for these behaviors. People who work there are joiners, people who want to jump in and spread joy and be part of a team.

There is no single “best” culture. There are simply cultures more, or less, aligned to company goals.

This brand has helped them find talent, reduce turnover, and transformed the patient experience. When candidates interview with them, they know immediately if they’re a fit or not. And if you’re an employee and not living up to the culture, positive peer pressure will surely be there to get you back on track. This is the sign of a strong culture. Strong aligned cultures are able to self-correct and drive differentiated performance. But beware – because strong misaligned cultures are equally dangerous to an organization’s ability to execute.

Don’t forget the tools

It’s easy to think that systems and technology are separate from culture. But they can be an important part of operationalizing culture. And if your tools contradict what you say your culture is, it can be a huge obstacle. For example, if you say you value candid, continuous communication, but have a performance or feedback system that is based on formal annual reviews, or if you don’t provide insights to help managers have that kind of communication, you’re not actually living your culture. If you have defined behaviors, your systems and tools should help managers hire, evaluate and develop people in alignment with those behaviors.

If your tools contradict what you say your culture is, it can be a huge obstacle.

Culture doesn’t just happen. Even when organizations understand the power of culture, they still struggle. According to Aptitude’s 2016 Hire, Engage, and Retain study, 60% of companies have an executive level customer experience role in place, but only 37% have an executive level role focused on the internal culture and experience of the workforce. Your organization will have a culture and set of norms and behaviors whether it receives executive attention or not. But that culture may not be aligned with your goals, or help improve your ability to execute them.

Organizations that do have an executive level role focused on culture and employee experience saw differentiated results in the Aptitude study, including:

- 71% greater improvement in candidate experience
- 58% lower turnover than the industry average
- 43% higher increase in employee engagement
- 47% higher increase in quality of hire

Customers are important, but without the ability to find and keep the talent needed to execute on the products or services you deliver, all strategies are doomed to fail. Keeping culture aligned, and systems in place to support it, needs to be something for which everyone is accountable. But it also requires real attention from leadership.

Conclusion

Culture is real and can have a real business impact. Understanding how behaviors drive culture and impact the organization’s ability to execute on strategy is critical to harnessing its power, as is executive attention that makes it a leadership responsibility. Just like the proper financial controls and the ability to set the right marketplace goals, having the culture and cultural tools to support work toward organizational goals should be a top-level priority. Organizations looking to leverage the power of culture should work to diagnose, define, and deploy the right systems and behaviors that create the unique environment your organization needs to support its workforce.

Great Places to Work Still Put People First

Zrinka Lovrencic

Managing Director, Great Place to Work Institute Australia

Zrinka works with leaders in a wide range of industries to assess their workplace cultures and support their organizations to become higher productivity workplaces.



People often ask me "when will robots completely take over from humans in the workforce?" It is an odd question to me, as I feel the concept of employees as robots is in the past.

We essentially turned people into robots at the assembly line over 100 years ago. When the first assembly lines opened in 1913, employees went from being craftsmen to specialists. It was the beginning of the last industrial revolution. Organizations were hierarchical by design; social, economic, and custom norms were different; and access to education was not what it is today. This was relevant at the time.

The Australian economy was dominated by wool production, and the agricultural portion of GDP was rising. By design, there were barriers for employees to specialize in more than one area of expertise, barriers to upward communication, and barriers to collaboration. You could argue that 100 years later, not much has changed in some organizations. Sitting in a shoe-box cubicle with physical barriers to communication and collaboration.

But our economy has changed. In Australia, industry now only makes up around 27% of GDP, with services contributing almost 70% and employing 70% of the workforce.

According to the World Bank, the service industry contribution to global GDP is growing at a rate of 1% worldwide. This is the fastest growing industry sector in the world. The growth in the service industry indicates that the world's most important resource is in fact it's human capital.

However, when we think about optimizing efficiency, we still tend to look at resources: specifically machinery, output, suppliers, the supply chain, infrastructure and logistics. The changes in the global and local economy, however, dictate that we should be focusing our attention on optimizing human capital, and putting employees at the center of operational efficiency optimization. This is a difficult transition, because so much emphasis is placed on building relationships, not only between people, but between the employee and the company.

My organization, Great Place to Work, has spent the last 30 years studying workplaces in over 50 countries. The good, the bad, and the sometimes very ugly. We are interested in the relationship between productivity, success and employee engagement. How does this workplace experience differ between the best organizations, and the rest.

A defining characteristic of the best organizations is that when we ask their employees what is so great about working there, they tell us "I believe in what we do, why this company exists. I believe in what we are trying to achieve, and I want to be part of it."

This is by far more relevant to the younger and upcoming generations of employees, the future of our workforce. These generations are extremely cause driven. They need a purpose, and the knowledge that they are contributing to a greater good.

Like customers have choice, employees have a choice of where they work. If they are not given a true purpose to keep them with an organization, they will go and seek it elsewhere. I believe this is a contributing factor to why generation Y and Millennials have a bad reputation for job hopping.

Every company has a mission statement, the essence of why it exists.

Every company has goals; the targets it needs to achieve for its stakeholders.

Every company has values, the set of desired behaviors that guide the way in which those goals will be achieved.

These need to be shared, because delivering on them is not only the responsibility of senior leadership, but of each and every employee. They are a way to align operations, inspire employees to a common purpose, help them understand the vital role they play in helping the company achieve its mission and goals.

These conditions are also vital for creativity and innovation to flourish. With a professional services-dominated economy, the human brain is our modern day primary resource and assembly line. Today we are employing people to come up with solutions to problems we don't even know we have, and products we don't yet know we need. Aligning the organization allows our employees to understand how the company comes together, how each department affects others. Present and open leadership empowers employees to engage in the decision-making process. It allows employees to think outside the box, look for better ways to achieve goals, to openly come up with solutions.

At Google, engineers are given free rein to innovate and donate 20% of their time to come up with inspiring new products and ideas. This has resulted in employee-led products such as Google Maps.

Technology company Atlassian hosts a “Shiplt” day every three months. They refer to it as “20% on steroids”. Probably the most recognizable achievement would be an entire business unit for the product “JIRA Service Desk” which started as a Shiplt Day project for their flagship product.

Marissa Mayer has been criticized for suspending work from home at Yahoo. As Marissa explains, Yahoo is an innovation company that simply didn’t innovate for a long time. Her aim is to bring people together at work, so they can talk, collaborate and bounce ideas off each other for new products. Working from home has its challenges in fostering creativity and collaboration.

So what can your company do today to increase creativity and innovation? One day a week does not make business sense for every organization. Here are some other examples to get you thinking:

- Xerox have a ‘no eating at your desk’ rule. It encourages employees to eat in the communal areas, and communicate and socialize with their colleagues.
- Nova Group runs a volunteer-based Think Tank to action ideas submitted by Nova employees, encourage the development of business cases and seek endorsement by the executive team. This process allows employees the opportunity to directly contribute to Nova in an area of interest, which may not necessarily be aligned with their day-to-day role.
- EMC hosts an annual innovation incubation engine. It is an occasion where senior executives present the most pressing business issues for the coming year. All employees are invited to respond with their innovative ideas. It is a great opportunity to directly impact the core strategy of EMC.
- Deloitte’s famous “Dumb Things” initiative, where every few years they ask their people ‘What are the dumb things we do? What is stopping you from doing your job?’ They did this for the fourth time last year and, while they are still finding rules that slow them down, Deloitte is a better business for running these initiatives and listening to and trusting their people.

This is really key: listening to and trusting your people; to believe in their potential.

So back to the robots. While robotics has had a significant positive impact in today’s society, it is still the responsibility of humans to innovate and create and lead our organizations into new markets.

Finally, one of my favorite quotes and a thought to leave you with, “How great would the society we live in be if everyone enjoyed going to work”- Thomas A. Edison.



Chapter 4: The Business of HR

In Brief

- Transformation has been a continuous part of the HR evolution, but business change has occurred even faster and HR finds itself lagging in each wave.
- This cycle of continuous change calls for HR to be fundamentally re-imagined to align with the demands of the digital era.
- A multidisciplinary set of skills is necessary in HR today that combine to address challenging business problems.
- Culture is an organization's greatest source of potential strength and weakness, and aligning culture with the business should not be simplified to a process or program, or rest solely with HR.
- Hierarchical organizational structures fail to create the environments conducive to the fast, adaptive and changeable digital workplace, and are overdue for remodeling.
- Best practices have been over-valued and over-used in HR; they oversimplify many of the complexities of human systems and behavior.
- HR management could be a "wicked problem" that resists resolution and keeps re-forming itself.
- Talent Lab 3 findings:

4 Paradoxes	4 Predictions
• The HR Paradox	• A new HR DNA
• The Performance Paradox	• Business HR scorecards
• The Learning Paradox	• Fresh HR practices
• The Analytics Paradox	• HR the hero

The Unresolved Identity Crisis

Self-reinvention is hardly a foreign concept in HR. The function has been reshaping, relabeling and restructuring for decades: many of us applied to the *Personnel Department* for our first jobs. The rebranding to *Human Resources* in the 1990s was a giant leap out of back office personnel administration into what seemed (then) to be significantly more strategic: managing the end-to-end processes in the employee life-cycle.

More recently, HR leaders around the world have attempted more ambitious and creative designations such as Human Relations, People & Culture, Human Capital Management, People Resource Center, Talent Resources or Employee Experience Team. HR job titles have similarly evolved from Personnel Manager, Recruiter, Industrial Relations Manager and HR Generalist to Talent Sourcing Specialist, HR Business Partner, Employee Advocate, HR Champion and Vice President of People, to name a few.

The technology transformation of HR also began years ago. Manual personnel record-keeping seems an activity of a lifetime ago (although it's not) and HR information and talent management systems are all well over a decade old. Decentralizing HR services has been the first real step toward eliminating HR administration: employee self-service via online HR and knowledge portals, help-desk support, case management tools, wikis and live-chat mean that employees today can manage the bulk of their own HR affairs.

The point is that HR has, whether by necessity, paranoia or evolution, remodeled itself unrelentingly – in name, function and its relationship with the business – in an upward spiral of increasing strategic importance to its stakeholders. And so it continues.

Reimagining HR – again

"No other group in organizational life, not even Finance, bosses us around as systematically as HR does."¹⁴⁰

Peter Cappelli
The Wharton School

The consecutive waves of reimagining the HR function roll on. Somehow, this reimagination seems to resist any permanency. Perhaps it's because whatever shape it takes, business leaders still see HR as an addendum to the *real* business, and a meddling one at that. What is becoming clear in this pilgrimage to resolve the identity of HR is that the skills required to advance it as a valuable business contributor go well beyond the HR archetype of the past.

People persons need not apply. As the HR function has progressed through its evolution it has taken on a significantly more professional persona and, through the continuous development of policies, procedures and programs to deal with all manner of statutory and organizational challenges, has also become increasingly complex. Once, aspiring HR practitioners joined because they ‘enjoyed working with people’ or some such similarly affable motivation. These days, people are human capital – and capital is big business.

Tertiary institutions got on board and elevated HR as a science in its own right, developing courses, degrees and even doctorates in human resources management. Unfortunately, the evolution of HR has continued where, in many cases, course curriculum has not – the result being a generation of HR practitioners qualified in industrial-age HR. Many have supplemented these qualifications with MBAs, finance or commerce qualifications. Even so, the demands of the digital age have raised the stakes again and new capability requirements confront HR.

The rug on which HR has established itself has, as they say, been pulled out from underneath it. The organizational challenges commanding HR’s support and expertise now include disruption that can kill a long-standing business almost overnight, a competitive landscape driven by the consumer rather than the enterprise, and a labor market that is changing the employment game to suit the digital landscape.

In that context, HR needs to settle a new order of priorities. Among his predictions for 2017,¹⁴¹ Josh Bersin includes:

- the need to align organizational design with the new world of work
- the importance of culture and engagement to optimize the contribution of talent
- the overturning of HR processes to improve the employee experience, and
- the increasing importance of diversity, inclusion and well-being in organizational life.

To address these demands, HR needs mastery over a broad range of skills:

- **Hard** skills such as business acumen, design thinking and digital intelligence, and
- **Harder** skills (previously known as *soft* skills) such as human motivation and behavior, leadership and cultural intelligence.

Increasingly, a multidisciplinary set of skills is necessary in HR. Top of the list is the need for:

- *marketing* expertise in communicating the employment brand and attracting customers – *candidates* – to that brand
- *business analytics* capability to use the extensive data sources about people in and outside the organization to understand and forecast capability needs and gaps

- *finance* expertise to underpin HR strategy, workforce plans and determine return on human capital investment
- *information technology* know-how to evaluate, implement and use the digital tools that now pervade the HR landscape, and
- *strategic HR* expertise to align all the components of HR management with core business objectives and provide competitive insights based on labor market knowledge.

Only armed with these capabilities can HR deliver on business expectations of its contribution to organizational performance. Clearly, no one individual can be expected to master all these capabilities – but they are all required in a generous mix across the HR function. HR skills and qualifications are certainly not redundant, but by themselves they are insufficient to straddle the complexities of organizations seeking a high distinction in their marketplace.

We look at the role of HR in more detail across three topic areas:

- leading culture change
- organizational structure, and
- people processes and practices.

At the heart is culture

“Few executive teams understand the daily maintenance that great cultures require and that explains why so few great cultures exist.”¹⁴²

Marc Effron
President, The Talent Strategy Group

We need a more [innovative] [customer focused] [agile] [courageous] [empowering] culture. Insert the appropriate adjective, or add your own.

If an ideal culture could be installed like a piece of software, it would be a best seller. Noted that books, guidelines and consultancies promising to transform your culture into that to which your organization aspires, are aplenty. But establishing or changing an organizational culture is not a simple step-by-step process, irrespective of the amount of stakeholder engagement that accompanies it.

Following decades of trying, it should be self-evident by now that cultures are organic – they blossom, change and fade over time – reinforced by worker actions that are sanctioned or shunned, and the leadership behaviors that signal what’s acceptable and what is not. No volume of employee surveys, forums, roadshows, town halls, briefings, posters, stickers or badges promoting the culture you want, can mask the reality of the culture that *is*.

Anyone who has ever attempted to shift or transform a culture will tell you that it's a nefarious exercise that few can claim to have mastered, is dogged with shadowy twists and turns and is typically inflicted on an audience that is ungrateful, uninspired and usually unhelpful.

That is because, unlike every other business process that we tackle, culture is represented by the collage of human faces behind the product, behind the brand, behind the stone and glass walls of the corporate headquarters. It is the emotional center, the heartbeat of the enterprise, and it is uniquely human.

Take the humans out and there is no need to concern yourself with culture. By influencing the human DNA in an organization, you impact its culture. For example:

- if you aspire to a more innovative culture, attract and retain creative, risk-tolerant, restless minds that are passionate about what is possible;
- if you aspire to a more customer-focused culture, infuse the organization with people who genuinely care about others, are emotionally connected to your product and purpose and inspired to create awesome experiences;
- if you aspire to a more courageous or empowering culture, eliminate fear and uncertainty with authentic leaders that build credibility by coaching and trusting employees to make their own sensible decisions and deliver their best work without unnecessary interference.

If you supervise a factory floor of robots, none of the above applies.

Somehow, this issue of culture, ubiquitous throughout the organization and transcending every functional boundary, lands itself in HR's lap with reliable frequency, wherein well-meaning practitioners set about applying the latest best practices to it, falling short most of the time.

But why is this an HR task anyway?

Culture is not a project, a program or an initiative. If someone in your organization has a job title with the word *Culture* in it, they are already primed for failure. Culture is what you get as an outcome of what the entire organization – its people – focus their minds and energies on. Consequently, leaders throughout the organization are fluidly shaping the culture every day by what they say and don't say, by what they do and don't do. As Niko Canner aptly puts it, *"leaders get the cultures they deserve."*¹⁴³

Culture change can, and in many cases, should, happen. Be it because:

- the organization becomes alienated from its customers and what made it successful, such as Nortel Networks where a culture of arrogance led to poor financial discipline and an inability to innovate; or
- the values underpinning it are toxic, as was the case at Volkswagen, where a relentless results-driven culture encouraged a 'win at any cost' mentality that elevated global revenue growth above product quality and business ethics; or
- the multinational business model does not adapt to different cultural contexts, such as the Home Depot and eBay attempts at expansion into China, Walmart's foray into Germany and Tesco's failure in Japan.

How culture change happens – with real and effective results – is then the challenge at hand. If we can accept culture as an outcome, the real attention turns to the levers that can be pulled all around the organization that might facilitate that outcome. Some such levers that successful leaders have used to assist their organizations make cultural transformations include:¹⁴⁴

- devolving decision-making to front line managers
- building a meritocratic reward system
- increasing transparency for employees
- offering more personal and professional development
- streamlining complex or outdated processes
- setting clear goals and communicate clear expectations.

HR does have a role to play, but culture is a team sport and everyone is on the field. It is the actions of leaders at every level of the organization that ultimately manifest into how the corporate culture evolves.

Because employees look to their leaders as role-models, these relationships underscore how the culture evolves. Leaders that are tightly connected with their teams have a relational interest, not just task-based interest, in their workers. They apply a strengths-based mindset that elicits discretionary effort, perseverance at difficult tasks and openness to change. High levels of such leadership connectivity have been shown to be a leading indicator of cultures that is more prepared for the organizational change, a marker of adaptive and successful businesses in the digital era.¹⁴⁵

HR's role therefore is to develop the organizational leaders that can subsequently effect culture change. Not run a culture change program.

Better by design

“Just as a combination of new technology pushed the artisan to the edge of society in the 19th century and was later applied to all types of organization, so for the same reason we will see mechanistic hierarchies supplanted by naturally based networks.”¹⁴⁶

Jon Husband
Organizational Futurist

In Chapter 2, we proffered the idea that the integration into the future workforce of numerous forms of virtual workers (from augmenting technologies to full-scale humanoid robots), challenges the very nomenclature of *Human Resources*. Rather, we suggest the concept of a *Talent Warehouse* comprising the organization's stock of all required and available skills and capabilities, human or otherwise, may be descriptively more apt.

It follows that a rethinking of organizational structures becomes both necessary and inevitable. Functional silos have been under attack for years, yet they survive in most organizations with stubborn tenacity. Ask yourself these questions about your workplace:

- does your organization still describe itself using the language of departments and divisions?
- are people's roles and relationships mapped on a hierarchical organization chart?
- are departmental interdependencies becoming increasingly apparent?
- are cross-functional communication shortcomings increasingly frustrating and debilitating?

Business architecture has become an urgent priority as the disconnect between the future of work and organizational structure become glaringly obvious. In some ways, it has struck with sudden impact: until recently, discussions have emphasized the ramifications of the digital world on the workforce and workflows. Now it expands to the organizational structures that house them.

So critical has the topic of organizational structure become that it headlined Deloitte's Human Capital Trends 2016 as the number one priority for business and HR leaders, with 92% of global respondents rating organizational design important or highly important. Featuring notably in the recrafting of organizational structure is design thinking, an approach originally applied to product design (the concept of creating an optimal customer or user experience by intelligent and responsive design) that also translates well into the employee experience. *“Design thinking transforms HR from a ‘process developer’ to an ‘experience architect’.”¹⁴⁷*

Design thinking takes a human-centered approach and weighs heavily how people feel about the experience they are having. HR has already wandered down this path with the focus on employee engagement and building compelling employment value propositions that make the employee the center of attention. But a holistic approach to re-imagining HR in its entirety through the lens of design thinking has yet to be fully realized. The core tenets of design thinking for HR are to:

- empathize with employees to understand their emotional response to the HR experience
- be prepared to iterate, through a series of tests and trials, to build prototypes of processes that work and are readily adopted by employees
- expect and embrace failure as a natural function of learning and adapt quickly.

Design thinking applied to HR shifts the experience from push to pull. It uses natural human brain patterns (rational and emotional) to craft an experience that employees want and need, rather than one that is imposed and tolerated.

As we will see in this chapter, the structure of complex systems is networked, not linear. This means that the hierarchies typical of public and private organizations in the past are ill-suited to a digital workplace that requires quick response, fluid innovation, open collaboration and accountability and decision-making at all levels.

Instead, the workplace should be organized to leverage all the resources once housed in discrete silos in order to fulfil a common business goal, be that a customer or product related one. For example, a team charged with the development of a new pharmaceutical drug might bring together expertise from medical science, diagnostics, sales and marketing, distribution, information technology and finance to bring the product to market.

Such teams can be formed around a purpose, collaborate to achieve that purpose, and either disband at its completion or re-form with the talent necessary to pursue the next phase of its implementation. Organizations will tap their network of skills, catalogued in their Talent Warehouse, to source and unite the teams of workers required to get the job done.

Emerging in place of traditional hierarchy as a form of organization structure that is more aligned to the fluid and responsive nature of the digital era is the concept of a *wirearchy*. Coined by Jon Husband in 2006,¹⁴⁸ wirearchy recognizes the formal linkages between people and functions in organizations but emphasizes the ‘white space’ between and around the boxes and titles on the organization chart as the place where real trust, cooperation and collaboration occur.

Wirearchy

Dynamic flows of power and authority based on knowledge, trust, credibility and a focus on generating economic and social value, enabled by interconnected people and technology.

The wirearchy reflects the informal, yet highly powerful and effective, relationships between people in the organization that are critical to making things happen.

A wirearchy can be visually displayed using *organizational network analysis* software that maps these relationships, creating what Founder and Chief Scientist at Orgnet, Valdis Krebs describes as “a way to X-ray your organization and see all the connections in play.”¹⁴⁹

Moreover, all the factors that distinguish work and the workplace in the digital era from those of the industrial era demand that archaic organizational structures belong with the now outdated processes and mindsets that created them – in the past.

The end of best practice

“Just because something worked there doesn’t mean it will work here: if you don’t understand the ‘why’, you shouldn’t replicate a ‘what’.”¹⁵⁰

Dave Snowden
Founder & Chief Scientific Officer, Cognitive Edge

Procedures and processes are great. Especially if all elements of the process are clear, the end-to-end steps are defined and there is a consistently reliable relationship between cause and effect: *when you do X, the result is Y*. In such a scenario, establishing a process that is continually improved until a best practice emerges, which becomes the implementation benchmark, is the logical and necessary goal.

But the crown of *best practice* as the penultimate goal of every industry seeking operating efficiency throughout the industrial era has continued almost unchallenged. *Almost*, because cracks started to appear when so-called best practices in the iconic organizations that created them, somehow failed to translate with equal integrity and impact in every business environment that subsequently espoused them. Some tinkered with best practice, reforming it into *right practice*, which took the available best practice and customized it just enough to suit the nuances of companies that didn’t fit the cookie-cutter model.

This reliance on applying best practice as the default answer to the question, *what should we do?* when approaching business problems – be they process or people related – is up for serious scrutiny. Certainly, best practices have mapped a tried-and-true shortcut for simple systems that do not warrant the reinvention of the wheel. But they also have their downsides. At best, these could be described as efficiencies, at worst, a form of cognitive laziness that has favored fast solutions over fully analyzed and custom ones.

In 2003 Dave Snowden published the Cynefin Framework (pronounced *kin-egan*, should your native tongue not be Welsh), a sense-making model that

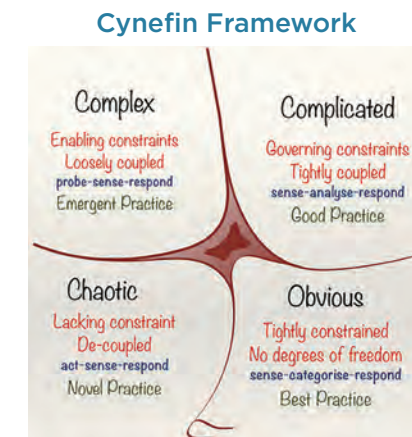
does just that: helps you make sense of your world by openly considering challenges in order to select an appropriate response.

Sense-making is distinct from classic categorization models, such as two-by-two matrices frequently used by consulting firms, because:

- in categorization models, data is gathered and applied to a pre-existing framework, whereas in a sense-making framework, the data is considered first and typically emerges through a social process; and
- a sense-making model is appropriate in periods of change or exploration, when the problem or challenge is unprecedented and no standardized action can readily be applied.

The Cynefin Framework proposes four domains (beginning bottom right) that each offer different lenses depending on the characteristics of the situation or problem at hand. These domains are as follows:

- **Obvious:** in which the cause and effect relationship is clear. This is the domain of *best practice*. The problem is known, has been dealt with before, and responds to a set of established steps which, when followed, yield a predictable outcome.



Source: Dave Snowden¹⁶³

- **Complicated:** in which the cause and effect relationship is not simple and requires the input of expert knowledge to determine an appropriate response. This is the domain of *good practice*. The problem is knowable but difficult. Best practices may be adapted based on deeper analysis in order to fit the nuances of this case.
- **Complex:** in which cause and effect only become clear in hindsight. In complex systems, the underlying patterns and interconnections become key to understanding the problem. Acting too quickly can be detrimental especially if simple solutions are chosen that fail to address the situational complexities. This is the domain of *emergent practice*.

- **Chaotic:** in which there is no perceivable relationship between cause and effect. Here, quick action may be necessitated by urgency to stabilize the situation. Thereafter, feedback will determine the next most appropriate actions. This is the domain of *novel practice*.

There are two additional components of the framework:

- **Disorder:** represented at the center of the model. This is the state in which the cause of the problem is unknown and it is unclear which of the domains best apply. This is a frequent challenge faced in business today. The likely selection of domains varies depending on the individual's personal experience and comfort zone.
- **The Cliff:** when people default continuously to the Obvious domain, they can potentially be blind to more complicated or complex challenges that underscore the situation or problem. Too readily applying best practice can lead to complacency. The result is a steady movement toward the boundary separating the Obvious domain from the Chaotic domain. Unlike the other boundaries, this one can have catastrophic consequences as it throws a stable system 'over the cliff', into chaos.

Few will debate that we are living in a time of rapid and unprecedented change. Many challenges we face in business today are complex in nature, and the known approaches of the past fall short of producing satisfactory, let alone ideal, results. The Cynefin sense-making framework provides avenues for understanding and responding to such change, and applying situation-specific approaches that are not limited by over-reliance on established best practice.

As a result, the Cynefin framework has effective application in strategic decision-making, knowledge management, culture change and innovation.

For example, the framework has been used to explain the emergence of Enterprise 2.0 tools in knowledge management. Before its digital transformation, knowledge management used structured, formal documents and portals to collate, store and disseminate information. In Enterprise 2.0, knowledge management uses responsive, interactive, social formats such as web search, social networking, wikis and blogs that facilitate fast communication and information transfer. In this case, the shift reflects knowledge management approaches falling over the 'cliff' from the *obvious* domain to the *chaotic* domain, as digital demands failed to be accommodated by prior best practices. The new Enterprise 2.0 communication tools emerged from understanding the complexity of the new environment.¹⁵¹

Perhaps the ultimate in complex systems is people. With so many variables impacting how people respond to change, results are rarely predictable and simplistic solutions that follow best practice are almost certainly destined to failure.

Yet in HR management, best practices abound. In every aspect of talent management, we can readily pinpoint simplified processes that aim to categorize the behaviors and motivations of employees and apply increasingly inadequate best practices for dealing with them.

- In **recruitment**, *best practice sourcing, assessment and selection* methods frequently prescribe questionable selection criteria, applied by inadequately skilled recruiters or line managers whose unconscious biases discount talented candidates that do not fit a narrow stereotype.
- In **performance management**, rigidly structured top-down *best practice performance appraisal processes* rely on selective and subjective judgments about performance over a 6-12 month timeframe, by often ill-prepared managers, and fail to either motivate employees or improve organizational performance.
- In **learning and development**, failure to apply an understanding of how the brain integrates and assimilates new information in the natural process of learning has led to countless wastage of time, money and effort on *best practice training and development programs* that deliver only marginal improvements.
- In **employee engagement**, *best practice standardized surveys* purport to provide accurate and actionable feedback on employee satisfaction and intention to stay, yet continue to fail to predict talent retention or improve engagement levels.
- In **career management**, the inability of *best practice succession and development processes* to identify high potential talent and align employee aspirations with work opportunities frequently results in talented workers prematurely exiting the organization.
- In **compensation management**, a mindset of extrinsic rewards dominates *best practice reward and recognition processes* in defiance of empirical evidence of the importance of intrinsic motivators.

In the last few years, HR has been compromised by the recurrent failure of employee management best practices – all of which were designed in the pre-digital era. In the face of such a backlash, a recognition that HR and employee expectations and practices are indeed *complex* surely applies.

Best practices have given HR a myopic perspective that has resulted in a spiraling repetition of reinforcing the known and subverting innovative thinking with over-simplified responses. It's time to put real cognitive effort back into tackling today's HR challenges, and let go of best practice.

Back to the Future

Many who have channeled their energies into a career in HR will empathize with this: why, despite literally decades of effort and implementation of HR practices does it remain the case that:

- leaders are rarely inspiring and invariably resort to command and control methods to get work outcomes?
- supervisors and managers for the most part still fail to grasp the fundamentals of coaching and motivating their teams?
- employees that join organizations full of ambition and vigor, succumb to ambivalence and disengagement?
- individuals claim to crave feedback, but shut down or become defensive when they receive it?
- organizations market themselves as great places to work, yet continually under-deliver on the promise?

Why do these circular problems prevail, and attempts to resolve them elude us?

Is HRM another ‘wicked problem’?

“The classical paradigm of science and engineering – the paradigm that has underlain modern professionalism – is not applicable to the problems of open societal systems.”¹⁵²

Horst Rittel & Melvin Webber
University of California, Berkeley

Coined by Rittel and Webber in 1973, ‘wicked problem’ was a term used then to describe complex town planning and societal problems that were almost impossible to solve due to their multidimensional, interconnected and unprecedented nature. They included the design of cityscapes, suburban neighborhoods, roads and highways. Wicked problems typically have a strong social or cultural element, to which no one resolution is universally applicable. Competing agendas, variegated interpretations, and often unforeseen consequences, accompany wicked problems.

Rittel and Webber compared wicked problems to the relatively simple and ‘tame’ problems in science and engineering that enjoyed the luxury of clear definition, amenity to analysis, and solutions that could be measured by impact. *“For any given tame problem, an exhaustive formulation can be stated containing all the information the problem-solver needs for understanding and solving the problem... that is not the case with wicked problems.”*

The concept has further been applied to the big unresolved issues of our time, including poverty, terrorism, climate change and environmental degradation. Being wicked, these problems have never gone away. Rather, they mutate and resurface, perhaps slightly altered and sometimes more challenging than before.

Wicked has become a way to describe some of the modern challenges in the realms of business and technology. They can be identified by several characteristics, including problems that:¹⁵³

- involve multiple stakeholders with different values or competing agendas
- have high levels of complexity and tangled root causes
- are difficult to come to grips with and are continuously changing
- have no precedent, and
- may have no ultimate right answer.

It doesn’t take too much of a mental stretch to see the persistent and perplexing problems related to human resources management in the frame of wicked problems. With all the diversity, individual differences and cultural dynamics at play in workplaces around the world, effective workforce management may be one of the wickedest problems of all.

The complexity of the human workforce has repeatedly defied being ‘tamed’ by overly simplified best practice HR processes, regardless of how scientifically and thoughtfully they have been designed. Each process iteration, designed to address the shortcomings of the last, has typically found its own nemesis, with no definitive solution in sight.

The evolution of the performance management processes over seven decades exemplifies the elusive, and yet unresolved, challenge presented by this wicked problem.

Wicked Performance Management

1960s	Paper based <i>Employee Service Records</i> are created to control employee behavior. Strictly confidential, they are never seen by the employee. These records rate workers on factors such as job knowledge, punctuality, loyalty and sincerity; little or no feedback is provided and adverse comments are detrimental to the worker's ongoing prospects.
Early 1970s	The lack of feedback is acknowledged as unproductive and, for the first time, employees are provided with an annual assessment of their performance in order to initiate the appropriate corrective actions. Ratings and comments are at the sole discretion of the reporting officer but can be overruled by a separate reviewing officer.
Late 1970s	The Performance Appraisal form is developed and brings sweeping changes to performance management. Employees are invited to provide input by adding their perceived accomplishments over the year in this first foray into self-appraisal. Inconsistency and subjectivity are addressed via the assignment of quantifiable targets, set by supervisors and managers.
1980s	Another significant leap occurs with the introduction of Key Result Areas (KRAs) and Key Performance Indicators (KPIs). HR departments labor to design highly structured and detailed forms that quantify all possible tasks and activities of the employee. Rigidly weighted rating scales feature prominently, and the forced ranking of employees (top 20%, mid 70%, bottom 10%) is popularized.
1990s	The dogmatic emphasis on quantifying performance spurs unanticipated and undesirable behaviors as workers strive to meet and exceed their KPIs. To balance the 'what' of performance with the 'how', Behavioural Competency frameworks are developed that define acceptable behaviors across a range of workplace competencies. The performance appraisal becomes longer and more detailed as competencies are added to KRA's – now refashioned into Goals or Objectives, and both managers and employees are deeply embroiled in the process.
2000s	Social and life sciences challenge thinking on the triggers of human motivation and workplace performance. Intrinsic motivators surface as critical to worker satisfaction and performance. A shift to align performance and development objectives sees the annual appraisal aim to strike a balance between past results and future potential. The war for talent highlights the increasing importance of talented employees and begins to shift the power balance toward the employee.
2010s	Backlash against the clinical rigor of the now extensive and laborious performance management process sparks a revolt and iconic organizations around the world take the proverbial ax to their cumbersome, disengaging and counterproductive performance processes. Some abolish rating scales; forced ranking is demonized; and the process and format dramatically simplified. The emphasis shifts to performance and development conversations, real-time feedback, frequent pulse checks and performance coaching.
Next Decade	Having 'thrown out' performance management, many trailblazing organizations uncover a new set of sticky challenges thwarting the achievement of high levels of performance and engagement from employees. Over-zealous simplification of the process without alternative anchors for managers and employees creates uncertainty, insecurity and unanticipated declines in motivation. Going back is not an option but no sure way forward presents itself. Hybrid processes are piloted.

Continuous attempts, applying both art and science to the problem of getting performance management right, return not only process failures, but also a downward spiral of disenchantment and disengagement by almost all involved.

Let's call it a wicked problem and also apply the Cynefin Framework to attempt to make sense of what is going on here.

- The opening presumption is that managing human workplace performance is predictable and simple and sits in the *Obvious* domain; consequently, best practices should apply.
- Early disappointing results with supposed best practices push the performance management challenge up to the *Complicated* domain; experts are called upon to develop better processes which are adopted as the new best practice.
- Continued iterations between the *Obvious* and *Complicated* (and back to *Obvious*) domains occur as each process revision unearths additional shortcomings or unintended consequences.
- Continuous refinements to best practice without satisfactory solutions accumulate the discontent of all involved. This finally pushes the problem over *the Cliff* into the domain of *Chaos*, where it is widely recognized as 'broken'.
- Stakeholders now realize in their state of *Disorder* that performance management is in fact a *Complex* problem (human motivation and behavior) and new work begins to understand the dynamics of performance and reimagine a way forward.

While the purpose of this discussion is certainly not to bring more complexity into HR (that would be ironic), the example of HR's failings with performance management over an extensive period exemplifies the trap of over-zealously implementing simplistic solutions to what are inescapably complex problems.

Future-proofing what exactly?

*"The best way to predict the future is to create it."*¹⁵⁴

Peter Drucker
Educator & Author

Performance management as an HR process has attracted the bulk of industry attention and debate but it is by no means the sole target of criticism in the talent management suite. In a Mercer global study, 85% of organizations admit that their entire package of talent management policies and programs are in need of an 'overhaul'.¹⁵⁵

If that was done, would it be enough to *future-proof* HR?

The study also highlights that only 4% of HR practitioners report they are viewed as strategic business partners in their organizations, so process redesign is unlikely to impress in the longer term.

Arguably, *future-proofing* is an oxymoron: by definition, the future holds many unknowns, and that is true now more than ever. Taking a defensive stand against future change is likely to encourage inevitably redundant strategies. Indeed, many best practices have used future-proofing some process or other as their justification for implementation.

Another trap is to dimension the future as a distant hypothetical place we are likely to reach, compared to the *present*, in which we currently reside. If we can entertain the mindset that the present is our reality and we create the future every day, then yesterday's future is the here-and-now.

The challenge for HR is less to future-proof but instead to achieve real alignment. Alignment embeds future-proofing as it requires constant, vigilant adaptation to the evolving business environment and consequent workforce implications.

The *future-proofing* challenge is two-fold:

- ensuring that workforce capabilities are optimized for future business needs, and
- ensuring the HR function itself is in alignment with future business needs.

Championing Business Intelligence

Where does HR begin to remedy its shortcomings in business intelligence?

There is an easy problem and a hard problem here calling for attention.

- The **easy problem** to address is the capability gap. The current level of HR skills versus those needed in 21st century organizations trying to succeed in a disruptive digital business environment is a formidable, albeit digestible challenge.

We can think of this in reductionist terms: by breaking down the specific technical and non-technical competencies required in a multidisciplinary HR function, the problem can be solved by importing or developing the list of requisite skills.

It presents as a straightforward plan of action that should be, and in many cases already is, underway.

- The **hard problem** to address is the mindset shift. This is required by both business and HR to rethink the competitive landscape of the 21st century and the role of human capital and leadership within it.

It requires an expansionist view that considers what it means to succeed in business, the broad social and economic implications of work, and even what it means to be human in a world of augmented intelligence and advanced digital transformation.

This presents as a complex problem with too many unknowns to confidently establish a clear roadmap.

To champion business intelligence is to proactively address both the easy and the hard problems: to not be complacent with the former, nor dismissive of the latter. This is a time for big thinkers in business and HR: leaders who can befriend uncertainty to inspire them to achieve their personal best, as a tennis player rises to the challenge when confronted by a superior opponent.

HR does not need to be a partner to the business; it needs to *be* the business. Every business leader is an HR leader because they channel the organization's human resources; every HR leader is a business leader because they impact organizational performance and productivity.

In many respects, the focus on establishing HR as a business partner has been counterproductive to HR's evolution. It has kept HR outside and alongside the business in many organizations. As such, some business leaders have viewed HR as an ancillary function, rather than core.

This has helped to put HR on the precipice, where one very real option for business today is to let HR fall over the cliff and manage without it.

Would that serve to improve the human capital contribution to business? Or can HR metamorphose into a value-creating integrated component of the business that no leader would want to be without?



Boot Camp: Business Intelligence

Time to act.

Nothing that adds minimal demonstrable value to business can be sustained in the digital age. What can HR do to upscale its business intelligence (BI)?

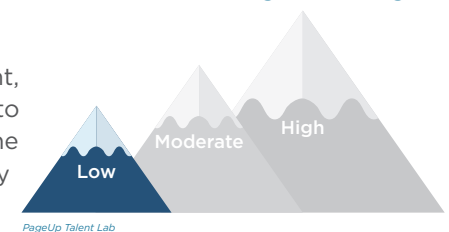
In the BI Boot Camp, we consider three phases for organizations and HR to address:

- **Warm Up:** preparations that should be undertaken now
- **Work Out:** activities that focus HR on high-value business activities
- **Wind Down:** legacy approaches that should be grandfathered.

What we know

- **Perceptions of HR business impact are low.** The continual evolution of the HR function has occurred on an HR trajectory that runs parallel to, but disconnected from, the business. Business leaders, under enormous pressure to adapt in the digital era, are increasingly challenging HR to elevate its contribution and impact on business outcomes. There exists both a capability and mindset chasm to be crossed by HR.
- **Organizational culture and structure need realignment.** The business environment is highly fluid and increasingly unpredictable: organizational structures are rigid and cultural mindsets are not necessarily in step with what will drive business success. Both are business-critical and need urgent alignment.
- **Many HR practices are 'broken'.** Established during the industrial age, in a time of linear growth and command and control management, past HR best practices are unable to meet the needs and demands of the modern organization or 21st century workforce.

HR Business Intelligence Rating



What needs doing

Delivering to business outcomes will require some soul-searching for HR, with an objective and non-defensive evaluation of the function's contribution to business outcomes and where and how these can be improved, including:

- using **business impact** as the litmus test for all HR programs and activities and being prepared to reinvent the function accordingly,
- realigning **organizational culture and structure** with the business needs of the future and shifting ownership for them out of HR and into the fabric of the business, and
- scrutinizing **HR best practices** in the context of a complex business environment and being prepared to significantly overhaul them where necessary.

BI BOOT CAMP

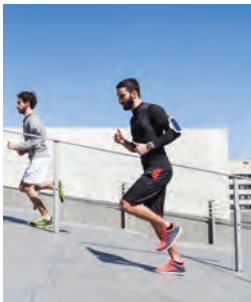
Warm Up



Business Impact

- Review all current HR reporting and evaluate its business impact.
- Understand the key business drivers and align HR metrics to them.
- Review the HR service model and determine its current effectiveness and future relevance.

Work Out



- Gather competitor intelligence on human capital flows and the external talent market.
- Reinvent the HR dashboard to capture business-focused HR metrics.
- Co-develop strategic talent forecasts with business managers.

Wind Down



- Retire inward facing measures of HR efficiency that track activity rather than outcomes.
- Stop HR 'business partnering' that merely localizes tactical HR at the business unit level and adds no strategic value.

BI BOOT CAMP

Culture & Organizational Design

- Objectively define the current organizational culture and its alignment with your digital future.
- Map the current organizational structure using organizational network analysis to understand real workflows and obstacles.

- Workshop organizational culture and structure with full cross-functional business representation, at multiple levels, with the goal of alignment for the future.
- Shift 'ownership' of culture and structure to all leaders in the business.

- Grandfather HR-driven culture surveys and culture initiatives that divest responsibility for organizational culture from the business.
- Remove rigid structures that reinforce silos and impede natural workflows.

HR Best Practices

- Accept *disorder* as a starting point and use the lens of the Cynefin Framework to scrutinize all current HR best practices.

- Conduct an audit of all HR practices for relevance and impact.
- Gain insights from the business strategy and business leaders on what actions will best serve future business outcomes.
- Refresh, reinvent and/or eliminate redundant or ineffective HR practices.

- Let go of entrenched habits and practices that fail to add business or human capital value.

Talent Lab 3

Organizational performance: how can HR move the needle?

Top 10 Quotes from Talent Lab Contributors

"HR ought to be a critical player, not just an advisor. There are questions the business is asking that HR should be instrumental in answering."

Thought Leader - U.S.

"In a sporting environment, it's fairly cut-throat: if you don't perform, it's an intolerant place to be. Business is far more tolerant of low performance."

HR Director - transport services

"If you're an executive in a company, act like one. Worry about the numbers in all parts of the business. Then you can have your say about HR."

HR Director - telecommunications

"A real conversation once a week is better than a fake one once a year."

HR Director - financial services

"Everyone cares about money but only some care about people. If you can help a business leader understand how having better talent will make them money, they'll be open to suggestions."

Thought Leader - U.S.

"We need to be flexible in our approach - otherwise we're locking talent out. It will find another home and that home won't be ours."

HR Director - retail

"Learn, unlearn relearn - we have to strategically let go of some past information to let new information, methods and ideas, in."

Thought Leader - U.S.

"There's a requirement for HR to re-examine its historical focus on input and effort, to instead focus on impact and outcomes."

HR Director - legal services

"We're in a time of experimentation - but HR is back where it was in 1910 - we have to invent it."

Thought leader - U.S.

"HR analytics is severely lagging - partly it's a capability issue: HR generally don't hire data scientists. But there is also an underlying unwillingness to really tackle the problem at its root cause."

Thought Leader - Australia

"The last thing a CEO wants is to determine a strategic change, hand the ball to HR and there's nobody there that's qualified to take it on."

Thought Leader - U.S.

In Talent Lab 3, we grappled with the ultimate question for a value-adding HR function: *organizational performance - how can HR move the needle?*

The mood is somehow somber. For no apparent lack of trying, HR continues to miss the mark when it comes to validating its functional contribution to the organization. Senior business leaders that are HR advocates are in the minority. The statistics are disheartening and unsustainable:

- business leaders rate their HR teams no more than D+ on keeping up with business needs¹⁵⁶
- HR falls short of expectations when 78% of executives want to talk about human capital in business terms¹⁵⁷
- even 61% of HR leaders believe their programs are barely adequate or falling behind.¹⁵⁸

Yet the drive for organizational performance has never been stronger, and the need and urgency for human capital contribution to it, never higher.

We explored this issue in Talent Lab 3 and surmised that a series of contradictions between expectations and reality about the focus and practices of HR were instrumental to undermining the potential value of this function. Our work centered on four unresolved paradoxes that overtly and covertly compromise HR's contribution.

In each case, the paradox is dogged by legacy mindsets and practices that are ripe for disruption in the digital era.

In each case, suggestions were made on how to move the needle to make a positive impact.

4 Paradoxes



The HR Paradox



The Performance Paradox



The Learning Paradox



The Analytics Paradox

1. The HR Paradox



Human capital is among the most strategic assets in any organization, yet HR struggles to quantify its impact on organizational performance. 42% of global companies report that the impact of HR operations on company success is 'weak'.¹⁵⁹

Why this paradox exists:

- the continued vague alignment between business drivers and HR initiatives
- an HR emphasis on activities and interventions rather than outcomes and embedded practices
- the growing gap between the business and technical capabilities of HR professionals and what is required.

What would move the needle?

- business intelligence: a deep understanding of what drives business performance and success as a result of HR's active involvement in business operations
- rethinking HR practices established last century: some require minor renovation while others are due for an extreme makeover – assess and adapt as required
- speaking the language of business: understand the competitive landscape and apply expertise in human capital management to fuel competitive advantage.

The HR paradox threatens the future viability of HR if left unaddressed. Already, C-level executives are rethinking, and in some cases, trialing very different models of, human capital management. Some of these reduce or eliminate the HR function in its current form altogether.

2. The Performance Paradox



The foundational premise is that performance management should drive productivity and engagement. This does not appear to translate in practice.

Why this paradox exists:

- the line of sight between the HR performance management process and organizational performance outcomes remains unclear and the linkages tenuous
- setting and tracking goals is inherently motivational in that it underscores personal achievement and enables the measurement of productivity. Yet the performance management process is continuously reported to be de-motivating, by both employees and their managers
- conceptually, feedback is highly sought after; practically, it is often feared and avoided
- performance management as a process has fallen victim to tedious, over-complicated and confusing forms and systems, rattling its users and defeating its purpose.

What would move the needle?

- make it meaningful: clarify the purpose of performance management and align the process to fit that purpose
- less is more: simplify, and eliminate any superfluous or redundant aspects of the performance process
- emphasize real-time feedback and coaching
- investment in mobile enterprise applications that support fluid performance management.

Performance, in every organizational context, is too important to be left in a sub-optimal state. The recent flurry of activity to reinvent performance management has seen many organizations ditch cumbersome formal practices in favor of more agile and engaging methods. The panacea remains evasive for now, but getting performance management right is a critical success factor that will build credibility with business leaders.

3. The Learning Paradox



Most CHROs subscribe to the 70/20/10 model of learning acquisition, yet on average spend 83% of their budget on formal training and off-the-shelf e-learning courses¹⁶⁰ that address only 10% of learning needs, leaving little for the 90% of informal learning that is most effective.

Why this paradox exists:

- the vast majority of learning content has been developed using traditional instructional training models and delivery channels (either classroom-based or simply shifting content online)
- Learning and Development departments are focused on return on investment (ROI) of training and learning that measures efficiency (delivery costs, hours per learner, satisfaction and completion rates) rather than effectiveness (business impact)
- informal learning through coaching, mentoring, observation, on-the-job experiences, secondments, projects and peer support are, by their nature, difficult to record, track and monitor – and rarely involve the L&D department

What would move the needle?

- leaders reinforcing a learning culture that promotes continuous learning
- HR developing an agile approach to formal and informal learning and development which values programs that deliver business impact
- changing the ROI measures of learning
- integrating adaptive and immersive learning experiences into the learning framework
- utilizing state-of-the-art technologies for content development and delivery, including gamification, virtual reality and interactive platforms, delivered on mobile devices
- testing and validating new learning approaches quickly to ensure promised outcomes are delivered, and adapt if necessary.

Learning occurs fluidly and naturally throughout life, but takes on rigidity and unnatural formality in the workplace, that decrease both learning absorption and enjoyment. The love of learning should be a cultural goal for adaptive organizations in the digital world.

4. The Analytics Paradox



There is an overwhelming quantity of HR data available today, but predictive insights arising from this are rare and underwhelming.

Why this paradox exists:

- information does not equal insight. An explosion of data has led to a proliferation of reports – most of which are backward focused, summarizing the past but providing little foresight
- the rapid availability of data generated by modern HR information and talent management systems has heightened expectations and increased business demand for meaningful workforce analysis – in many instances, catching HR unawares
- executive skepticism about the quality of HR data – its sources and analysis – remains high
- HR analytics demand greater emphasis on privacy and security, in an environment seeking more transparency
- data science and analytics are the weak link in the HR practitioner skill set.

What would move the needle?

- unification of disparate HR data sources, backed by a quality overhaul
- integration of HR systems to ensure all data points can be meaningfully applied to the required analyzes
- understanding the business problem that the data is trying to solve and working back from this point to establish appropriate metrics
- creating a multidisciplinary HR team with the combined business, HR, technology and analytics skills necessary to support a digital business
- investment in HR technologies that aggregate and simplify analytics.

The story of the Oakland A's baseball team transformation based on data science replacing the traditional subjective gut-feel approach to the selection and payment of players, was made famous in the Hollywood movie, *Moneyball*. HR suffers from many similar legacies in thinking and practice as the 'old guard' of leaders at the Oakland A's. Applied analytics changed the game for the Oakland A's and made them a phenomenal success. HR analytics is HR's *Moneyball*.

4 Predictions

1.	Non-HR business leaders will inject new DNA into HR
2.	The HR scorecard will include financial, market and people performance indicators
3.	Fresh thinking will transform performance and learning management
4.	HR will emerge as hero and key contributor to organizational performance

In addition to the 4 Paradoxes, we took the research and dialogue generated in talent Lab 3 to proffer the following predictions.

1. Non-HR business leaders will inject new DNA into HR

Already a feature in some organizations, business leaders from multidisciplinary backgrounds are entering HR. In part, this is a *push effect* on HR as a result of business frustration with the perceived lack of impact of the function, and in part, a *pull effect* as HR itself identifies the need to bring a deeper, broader range of skills into the function.

Viewed through the lens of three alternate functions, learnings and practices that have been effectively implemented in other business functions can readily translate into HR to bolster its capabilities:

- *CFO lens*: for finance and analytical skills, quantitative modeling of workforce plans and the establishment and tracking of business focused metrics
- *CIO lens*: for IT systems knowledge, data integration, innovation through technology and project management skills
- *CMO lens*: for employment branding, digital media optimization, strategic market analysis and brand ambassador programs.

As this suggests, the traditional silos that exist between business functions is a relic of the past that is increasingly a limiting factor in an organization's ability to leverage its unified resources and implement agile business strategies.

2. The HR scorecard will include financial, market and people performance indicators

As an extension of multidisciplinary input, we also predict that HR will be scored on a multi-faceted output. Most current HR metrics and dashboards track HR performance as a function of the programs and initiatives executed, rather than their business impact.

We expect that the injection of financial, IT and marketing expertise into HR will yield internal and external measures of effectiveness that will provide quantitative and qualitative evidence of HR's performance and business contributions.

3. Fresh thinking will transform performance and learning management

The reinvention of performance management is under way. We predict a similar transformational shift to occur in organizational learning management.

This will include rethinking L&D from being a silo function to becoming an embedded component of business. It will open the door to relevant, timely and engaging learning experiences being delivered where and when learners need them. It will draw on significant technology advances including hardware, such as wearables, and software, such as gamification and virtual reality simulations.

4. HR will emerge as hero and key contributor to organizational performance

Perhaps our boldest prediction is that the perception of HR itself will see a quantum shift. No longer the underdog of business functions, HR will emerge as hero when business leaders see that human capital management in the organization is truly driving competitive differentiation and business advantage. HR will attract the 'best and brightest' and be the go-to precursor for executive leadership and CEO succession.

The New Reality Preempts a New HR

John Sumser

Principal Analyst, Key Interval Research

John is also Principal Analyst and CEO of HRExaminer, a consultancy that publishes strategic insights for HR professionals. John explores the people, technology, ideas and careers of senior leaders in human resources.



It's possible that HR will be unrecognizable a decade from now.

Over the past 5 years, investors ploughed over \$2.5 billion¹⁶¹ into hundreds of projects that stretch the boundaries of HR as we know it today. The pace continued in 2016. Newly minted HR data and analytics professionals bring great statistics credentials, but little in the way of knowledge or understanding of the field. The combination of these two trends suggests that brand new ways of seeing and executing are about to emerge. Lots of money plus lots of technology plus “beginner’s mind” is an ideal recipe for innovation and transformation.

The ten broadest trends currently shaping the market are:

- a drive to make management of people more predictable utilizing machine generated recommendations;
- automation of work, sometimes utilizing robotics;
- an experiment with the design of the employment experience, based on the idea that the fit between employee interests and job requirements delivers better output;
- development of internal communication tools that model ‘keeping the workforce on the same page’ as if it were a direct email marketing problem;
- a significant expansion of the organization’s involvement with potential employees as stakeholders;
- harnessing data from outside the organization to drive internal results;
- powerful changes in the way work is executed, where it is executed and by whom;
- digital communications complexities that make it difficult to tell the difference between work and not-work;
- changing definitions of key HR functions – for example, learning is increasingly seen as an inherent component of work rather than a sphere somehow separate from operations; and
- radical demographic changes that give us multigenerational workplaces and a contingent of young workers who will live to see 100.

The breathiest visions of the future, rooted in these trends, include:

- the rapid emergence of an all-contingent workforce over the course of a decade;
- the replacement of most managers with some form of automation;
- the capacity to stay in touch with everyone all the time while still remaining productive;
- a new model that blurs the distinction between work and life;
- complete predictability in decisions that involve people; and
- the rapid development of heretofore unknown jobs.

The real question is how to separate the hype from the reality.

In the wake of both the 2016 UK Brexit vote and the American Presidential election, there are new unanswered questions about the underlying validity of surveys and predictions just as these are entering the workforce at scale. One thing these events make clear is that the answers you get depend mightily on the questions you ask. This simple dynamic creates uncertainty in the idea that one can make decisions about some measured reality as if it was objective.

The dystopian vision of an all automated workforce where machines learn under human supervision is tattered. If the very professional, highly compensated political pollsters were unable to clearly see the situation, what chance do poorly trained, underfunded HR practitioners have? The ‘automation of work’ problem is significantly more nuanced and sophisticated than the ‘who are you going to vote for’ question. The business problem has many more variables and many fewer data points.

The Brexit vote and U.S. election might contain enough data to effectively utilize big data style analyzes. The business problem rarely has that much data. We are starting to see research that discovers that there’s simply not enough data to answer some simple questions.

“If the very professional, highly compensated political pollsters were unable to clearly see the situation, what chance do poorly trained, underfunded HR practitioners have?”

For example, here’s the conclusion from a four-year UK study that tried to identify physicians who were more likely to kill you. The study compared mortality rates following surgery as an indicator of physician quality. The higher the mortality rate, the lower the quality. Surgeons simply don’t do enough surgery to be measured in this way.

“At present, surgeons with increased mortality rates **are unlikely to be detected**. Performance within an expected mortality rate range cannot be considered reliable evidence of acceptable performance. Alternative approaches should focus on commonly occurring meaningful outcome measures, with infrequent events analyzed predominantly at the hospital level.”¹⁶²

In other words, four years of performance data is not enough to separate the best surgical performers from the worst. The noble mission, to help consumers understand and manage their medical risk, failed because there wasn't an adequate level of data to see meaningful statistical difference between surgeons.

The same is true of our ability to measure and predict the performance of workers, particularly those in knowledge occupations where the actual work is rarely routine.

It's likely that the abundant hype surrounding the introduction of machine sensibilities into the workplace will be larger than the reality. Meanwhile, the insights we are gaining about how organizations work, and under what circumstances they thrive, are relentlessly mounting. That means that we are really at the beginning of learning to ask the right questions about how to utilize intelligent technology to make our organizations work better.

In the end, that's where the real difference in HR is going to develop.

Today, we have a very mechanistic view of our companies, governments and non-profits. We tend to see them as machines that operate like conveyor belts. Input => Process => Output is our native model. What's happening, as we observe and facilitate collaboration, is that we are beginning to see them as networks of networks rather than hierarchies of rules. While that's an improved metaphor, we are really moving towards a more organic, biological view of our organizations.

"If a contemporary organization were a living creature, most metaphors would be describing the food and the poop."

First, we will learn the mechanics of the network of networks model, then we will learn to make sense of the reality that an organization is a living, breathing organism with purpose, moods, ideas and culture. Our current set of descriptive metaphors emphasize external results in specific arenas at the expense of other equally meaningful outcomes. If a contemporary organization were a living creature, most metaphors would be describing the food and the poop.

More interesting (at least to some) is the sum total of what happens to people who are members of the organism. As participants in a complex biological process that transforms inputs to outputs, employees and potential employees form another Input=> Process=> Output dimension. After a while, both the employee and the organization are measurably better off for their relationship. We will get better at understanding precisely how that equation works.

It certainly is not as simple as "we pay you and you do work". Both employee and employer continue to receive value from the relationship long after the formal relationship concludes. We seem to be accumulating

enough of the kinds of data we need to better understand the lifetime value of an employee.

"On a very real level, there is nothing left to automate."

Similarly, we have reached the end of mechanistic process automation. Since the mid 1980s, we relentlessly computerized and rationalized every imaginable business function, including those in HR. On a very real level, there is nothing left to automate.

That means we can begin to reconsider whether the department level silos of HR expertise really make sense.

The very first element of the complete redesign of HR will involve the question of learning. Like all HR functions, the Learning and Development department is currently ghettoized. Learning is usually treated as something that happens independently of work. At most, learning is a precursor to work. The fact that our software and business processes require continual learning is rarely an element of the L&D group. That's about to change.

"The difference between being a fully enfranchised member of the tribe and a raw recruit is a question of learning."

When silos were useful as a way to get the core of automation done, the elegant solution treated learning as an island unto itself. But, anyone who understands the various other talent management processes (acquisition, succession, performance management) knows that learning is a part of everything. Contemporary technology makes it possible to define and track learning as a part of ongoing processes.

The difference between being a fully enfranchised member of the tribe and a raw recruit is a question of learning. Development in the job is a question of learning. Switching jobtracks is a question of learning. Where organizations of the early 20th century viewed training as a cost center, the new HR department will champion learning as an investment.

Imagine companies where the training is so good that the bar for new recruits is continually being raised, that the overall performance of the enterprise is driven by focused and directed learning that happens at every step of every workflow.

In that regard, recruiting will be understood as the place where training begins. Contemporary employment branding initiatives will be reframed as pre-hire onboarding. Small nuggets of micro-content, culled and curated by the line supervisor will be the essence of the line employee's information diet.

A decade from now, there will be new, interesting and currently unimaginable jobs, and lots of them. As we come to understand how our organizations actually work, we will get better at harnessing their potential. HR may be unrecognizable but it will still be a part of the operation.

The New Business of HR

Nick Sutcliffe

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Nick spearheads human capital research projects across the region and has co-published numerous research reports on leadership, talent development and human capital practice, with a specific focus on India, China and ASEAN.



The world is adapting to a global economic environment disrupted by uncertainty and shocks. The new normal is slow growth while meeting the challenges of unseen competition with new business models from multiple and diverse markets. Businesses are having to adapt to meet the challenges of geopolitical risk and supply side constraints: slowing labor force growth and weak productivity. It is in this environment that business leaders are looking to their talent to drive change, innovate and react to ensure the sustainability of their companies.

"We have to ensure that the workforce of the future is developed in tandem with the culture and values of their companies."

When questioned, global CEOs have articulated the need for their organizations to focus on the development of their talent and leadership to drive the change that will ensure the best practices of operational excellence, productivity, customer centricity and innovation are met. To drive their organizations forward and meet the challenges of tomorrow, we have to ensure that the workforce of the future is developed in tandem with the culture and values of their companies. In this environment, the old world of HR may not be ready, or equipped, to meet these challenges.

Traditional HR practices are ingrained, with a focus on creating HR strategy to drive people strategies, and ultimately addressing business challenges. Leaders are developed to deal with the challenges of today, not tomorrow. Strategic workforce planning is undertaken without consideration of external factors or rapidly changing competitive landscapes. Ultimately, HR talks of transformational change, while business partners talk of quarterly results, metrics and data. Can HR practitioners rise to the challenges, speak the language of business, and meet the demands of future talent?

"An understanding of analytics and evidence-based HR to drive the business conversation and articulate the story is critical."

The bridge can be crossed, but it will require a change of mindset, a shift in thinking, where the focus is on the business challenge and not on the HR practice. In a world of short-termism, a step back is required to consider values and purpose, and how those values are aligned with strategy. An understanding of analytics and evidence-based HR, to drive the business conversation and articulate the story, is critical. Finally, an acceptance that we now live in a digital world, where our future employees are, rightly or wrongly, well informed and connected, is required.

When addressing mindset, the natural reaction is to study those often mentioned disruptive companies: How do they think? How do they challenge business and social norms? On a more granular level, J. Kenji López-Alt, wrote the US best-selling cookery book, "The Food Lab". In it, he debunked traditional methodologies of cooking, exploring the permutations, the considered traditional approaches to cooking. He adopted a scientific approach, often through a comparison between control measurements and the other measurements. In essence, he refused to accept the given as best practice and always asked *why?* HR process is a science too and, in order to develop, we must learn to ask *why?* The business of HR must learn to experiment and constantly ask *is the traditional approach the right way to do things?*

"Talent acquisition needs to assess not only the skills of the candidate, but also their values alignment with the business."

With declining numbers in the workforce and the disconnect between educational institutions and business exacerbating the workforce readiness challenge, talent acquisition strategies are going to have to evolve from being driven purely by competencies. Talent acquisition needs to assess not only the skills of the candidate, but also their values alignment with the business. And the pool of talent is diverse. Why invest in the development of talent if the talent does not have the values of their future employer? Some companies are already using gamification to assess the values of their candidates; others are moving away from the traditional competency models; EY has broadened its recruitment policies to engage non-graduates. In essence, these routes recognize that diversity of talent is going to help drive their businesses forward and that the values of the business are a powerful hook in attracting and retaining talent.

With a focus on talent acquisition, development and retention, workforce analytics is changing the conversation. When one considers talent development, the standard practice is to implement a series of interactions, be they coaching, international assignments, action learning etc. However, if one considers these as levers, HR pulls them all with little understanding of the value of each individual component, rather only assessing the impact of the combined result. Analytics will allow a better understanding of the metrics of each lever and allow for the return on

investment to elements measured. This changes the conversation from, we are transforming this *to* we are doing this *and* this is how you measure the value. Ultimately, we are changing the conversation from an anecdotal one to a predictive one.

Beyond analytics, the advent of the 4th industrial revolution has arrived – a digital revolution that will harnesses both data and technology, that will reshape business strategy, reshape companies and disrupt industries. While many executives believe that digital transformation should be a strategic priority, few companies are prepared, primarily driven by a lack of digital leadership and familiarity with the processes and benefits. As business begins to realize the benefits of the digital transformation, it will provide an upside in innovation, productivity and growth. In tandem, HR leaders need to consider their role in the revolution; established functions will be disrupted, including organizational design, learning, talent and skills. As the digitization of labor becomes a competitive advantage, the world of HR will need to be more agile in its operations and thinking.

HR, with a traditional focus on the development of talent, must consider the future of work. Skills, and the definition of competencies, are evolving. Consider the basic competency of collaboration: it was initially designed to ensure employees could transition from a hierarchical structure to a matrix driven environment. Now collaboration involves working with colleagues in different time zones, from diverse backgrounds and across multiple media. In the future, and with the advent of the contingent workforce, leaders are going to be hired to drive specific projects: how effectively they collaborate with their internal and external network will be the key driver in ensuring project success.

HR leaders must focus on their own development and that of their teams. To do this they need to consider how they can mimic the future of leadership. They must surround themselves with experts with experience that is unorthodox to HR – expertise in marketing, finance, social media, analytics, strategy and the digital world – if they are going to evolve to meet the challenges of business and the business of HR.

The world is changing. Business is changing. Is HR changing?



Chapter 5: Insight through Innovation

In Brief

- The volatile, uncertain, complex, ambiguous (VUCA) global environment is an inescapable reality of the digital world that holds many opportunities, to which we must learn to adapt, not overcome or succumb.
- The innovation agenda gathers pace and scale in the digital era and is a crucial competitive differentiator for countries and companies around the world.
- Innovative leaders spearhead innovative organizations and have a unique set of leadership characteristics.
- Ambidexterity is required for organizations to juggle the balance between optimizing today's business while simultaneously preparing for tomorrow's.
- HR can be a catalyst for innovation and leading organizations demonstrate HR strategies and practices aligned to the future needs of their business environment.
- By facilitating the conditions in which an authentic culture of innovation can prevail, organizations will attract innovative people, who in turn reinforce an innovation culture.
- The debate about the future of the function puts HR on the precipice of the cliff. Now is the time for HR to take a stand: redefine itself and its contribution to business.

Disruption or Innovation?

In the not too distant past, we actually recognized incremental, linear progress as innovation, such as doing something faster, cheaper or better than before. Now we consider such increments as a natural extension of their development and take them for granted as continuous improvement.

Disruption

Disturbance or problem which interrupts an event, activity or process.

Innovation

A new method, idea or product.

Oxford English Dictionary

Today, disruption and innovation go hand in hand. Real innovation is much more than improvement. An innovation is quite likely to be faster, cheaper or better than what it supersedes, but that is not enough. To be truly innovative in the digital world, a disturbance – at scale – is almost certain to occur. Today's innovations and innovators are transforming business and the world, and in their wake are winners and losers.

The VUCA opportunity

"If you're not confused by current events, you're not paying attention."¹⁶³

Bob Johansen

Author: Leaders Make the Future

Standing on the precipice looking into the chasm, most would admit the scene is scary and warrants a solid strategy and a cunning plan.

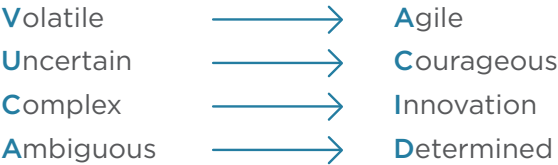
Scary, because it is VUCA. The business world has lost its predictability. Traditional strategic forecasting catches organizations out in their efforts to adequately anticipate business scenarios beyond the short-term horizon.

As the variables are mostly out of the direct control of business leaders, there is recognition that the response to VUCA is not to attempt to neutralize it: the market *is* volatile, conditions *are* uncertain, the environment *is* complex and strategies *are* ambiguous in their effectiveness. VUCA has no obvious counter levers that will restore the state to a predictable equilibrium.

We need to work with VUCA, not against it. The situation may seem chaotic, but it is not anarchic. The VUCA environment can be tempered. It needs an ACID response. We can address:

- volatility by being **agile** – nimbly responding and adapting strategies based on real-time feedback and having an active eye on the future
- uncertainty by being **courageous** – creating a fearless yet pragmatic culture in which uncertainty does not paralyze progress and diversity thrives

- complexity with **innovation** - challenging existing models, accepting the absence of precedent, and embracing new and potentially disruptive opportunities, and
- ambiguity with **determination** - persevering despite lack of clarity and figuring out the best approach, without prematurely discarding options.



In most references to VUCA, the acronym is used to cast a warning: we are under threat in a time of profound unknowns and there is no guidebook to help us. But like many things in life, where there is threat there is opportunity; where there is risk there is also reward.

We cannot underestimate our primeval instincts to automatically react to change with suspicion and fear, to protect ourselves from the unknown by vehemently seeking to restore equilibrium, and to reject new or confronting pathways in favor of familiarity and comfort. That comes with being human.

But after all, the future is one that we as humans are creating. No alien is thrusting it upon us and, while volatility, uncertainty, complexity and ambiguity may be high, the surprise element is low. We are the future of our creation and it is a function of having developed an insufficient mass of the right skills for this future, that we are at times overwhelmed by it.

Opportunity abounds in the VUCA world. As future forecaster Bob Johansen points out, with adequate *foresight* (by immersion in future trends), *insight* (using sense-making to create strategies) and *action* (by gaining new skills to respond), we can be ready, not only to respond in the VUCA context, but to optimize the opportunities that most certainly exist there. He points out that volatility yields to vision, uncertainty yields to understanding, complexity yields to clarity and ambiguity yields to agility, and that the acquisition of a new suite of skills is necessary to equip leaders for this future.¹⁶⁴

VUCA has caused many to revisit traditional leadership models to source the styles, skills and behaviors most relevant to the dynamically evolving digital environment. New concepts are also emerging, such as *Cloud Leadership*, which borrows the principles of convergence, accessibility, networking and instant communication associated with cloud technology and applies them to leadership skills. Combined with bringing the qualities of nurturing, collaboration and sense-making to teams, Cloud Leadership sets a skills agenda for current and future leaders with a Millennial mindset in a VUCA environment.¹⁶⁵

VUCA certainly calls for a new set of skills to navigate through and thrive in it. Acquiring these skills, rather than launching futile attempts to circumvent the environment requiring them, should be the focus of attention.

A global innovation imperative

“Instead of focusing on beating the competition, you focus on making the competition irrelevant by creating a leap in value for buyers and your company.”¹⁶⁶

W. Chan Kim & Renee Mauborgne
Authors: Blue Ocean Strategy

The world values innovation

At a **national level**, countries that rank highest on innovation set the global benchmark for advancing the living and working conditions of their citizens by optimizing their use of, and investment in, innovative policies and programs. Economically, they enjoy higher rates of GDP; socially, their populations enjoy greater longevity and social infrastructure; politically, they are relatively stable and progressive.

The World Economic Forum rates twelve factors that underscore the rankings of countries to construct the list of the most globally competitive.¹⁶⁷ These factors include the country’s macroeconomic environment, infrastructure, health and education, labor, financial and goods market efficiencies, technological readiness, business sophistication and innovation.



Switzerland is consistently at the top of this table, with Singapore ranked second and achieving the highest rating in the *higher education and training* category.

The U.S. leads the world in *business sophistication* and *innovation*, but lags in core factors such as *infrastructure* and *public finances*.

Finland achieves the highest rating for *institutions, health and primary education*, and Hong Kong tops the list for *infrastructure*.

Globally competitive countries recognize the necessity for continuous investment in the fundamental components of their political, economic and social systems to drive national growth and prosperity.

That said, the undercurrent of societal dissatisfaction with uneven wealth distribution achieved from national growth, both within countries and around the world, is looming as a major threat to established power.

Despite global progress in advanced and developing countries, the WEF forewarns of significant risks emerging from uncertainty in this time of global transformation. Their three key conclusions highlight that continuous global growth is tenuous and cannot be assumed. Notably:

1. central banks manipulating monetary policy as a primary mechanism to stimulate economic growth is insufficient in the absence of comprehensive competitiveness agendas that spur entrepreneurship
2. technological innovation, through the combined advances in the digital, physical and biological sciences, underpins development and competitiveness
3. declining openness and increased protectionist policies and regimes, threaten to undermine future global prosperity by reducing incentives to innovate.

The growing backlash against the establishment is already impacting power dynasties and market stability. Innovative countries will need to invest in their national dialogue and bring greater balance to sharing the spoils of innovation.

Business values innovation

At an **organizational level**, the U.S. dominance over innovation becomes evident, with nine of the top 10 globally most innovative companies originating there. In fact, in the top 50 innovative companies, 30 are U.S. based, 4 each in China and Japan, 3 in South Korea, 2 in India and France, and 1 in each of Denmark, Ireland, Saudi Arabia, Russia, Switzerland, Indonesia and the U.K.¹⁶⁸

Half of the top 10 companies operate in biotechnology and life sciences, reflecting exponential advances in this industry. Disruptors also feature notably: Tesla at the forefront of automotive and solar technologies, Under Armour in sports and general apparel, and Monster Beverage redefining the soft drinks market.

All the most innovative companies exhibit an *innovation premium*: their market value exceeds that of the net present value of their cashflow. Investors perceive a greater value in the company than its current performance indicates: potential trumps performance. And very often this has much to do with the perception of the company's leadership.

Top 10 Most Innovative Companies, 2016

Rank	Name	Country	Industry
1	Tesla Motors Inc.	USA	Automobile Manufacturers
2	Salesforce.com Inc.	USA	Application Software
3	Regeneration Pharmaceuticals	USA	Biotechnology
4	Incyte Corp	USA	Biotechnology
5	Alexton Pharmaceuticals Inc.	USA	Biotechnology
6	Under Armour Inc.	USA	Apparel, Accessories & Luxury Goods
7	Monster Beverage Corp	USA	Soft Drinks
8	Unilever Indonesia TBK PT	IDN	Household Products
9	Vertex Pharmaceuticals Inc.	USA	Biotechnology
10	Biomarin Pharmaceutical Inc.	USA	Biotechnology

Source: Forbes.com

Talent values innovation

At a **leadership level**, individuals that create and lead innovative companies are themselves innovators. At the MIT Leadership Center, studies of the most effective innovative companies globally, consistently point to leadership that shows mastery over five characteristics:¹⁶⁹

1. **Questioning**: an unrelenting provocation of the status quo: asking 'catalytic questions' that challenge existing thinking and operational paradigms.
2. **Observing**: immersing themselves personally with the people and processes in the business as well as external stakeholders to develop first-hand experience of their product or service.
3. **Networking**: establishing extensive and broad relationships and networks to promote divergent thinking and radical ideas from outside their existing realm of expertise and experience.
4. **Experimenting**: making and breaking things fast, cheaply and repeatedly to test and trial ideas and concepts in a continuous cycle of innovation.
5. **Associating**: making connections between ideas, between people and across industries that may be novel, unorthodox or hidden, and drawing new insights from the association.

This combination of skills ensures leaders are working in the business, on the business and beyond the business, continually sharpening their insights and challenging their colleagues and teams never to stop critically thinking about options and possibilities.

Innovative leaders are also magnets for innovative talent. Their vision and commitment to execution inspires those around them to emulate the characteristics of creative innovation, pioneering the unknown and relentless perseverance.

13 Leaders Who Changed the World for the Best

Name	Company	Industry
Tim Cooke	Apple	Technology Hardware
Warren Buffet	Berkshire Hathaway	Investment
Bob Iger	Disney	Experiences
Reed Hastings	Netflix	Streaming
Huateng 'Pony' Ma	Tencent	E-commerce
Reshma Saujani	Girls Who Code	Gender Equality
Jack Ma	Alibaba	Online Marketplace
Jan Koum	WhatsApp	Social Networking
Bill Gates	Ex-Microsoft	Technology Software
Elon Musk	Tesla	AI, Motor, Solar
Jeff Weiner	Linkedin	Social Networking
Howard Schultz	Starbucks	Retail
Vivek Ranadive	Sacramento Kings	Basketball

Source: Center for Management and Organizational Effectiveness¹⁷⁰

There are many more recognized and unrecognized names that deserve a place on such a list: innovative leaders can be found in all walks of life and at all organizational levels. More than ever, they are likely to emerge from unexpected backgrounds, roles and locations. And more than ever, they are changing our world.

Juggling ambidexterity

“Leaders understand that creating a new business and optimizing an already existing one are two fundamentally different management challenges. The real problem is doing both simultaneously.”

Vijay Govindarajan
Author: The Three Box Solution

Innovation is much easier said than done. Few would argue the essential requirement for today’s organizations to be constantly innovating: complacency and stagnation are a sure business death wish in the digital age. Generally, organizations do not debate the need to innovate, but are often challenged pragmatically by the resource allocation split required between innovation and their core business. It is a matter of juggling:

- **exploitation** of the existing business model (including core products and services, target customers, market channels and revenue models), and
- **exploration** of new innovations (incremental and/or potentially disruptive to the existing business model).

Both are necessary. Too narrow a focus on exploiting the existing business model can optimize short-term profits, but at the expense of future survival if customer preferences change significantly or innovative competitors disrupt the status quo. Such was the case with Blockbuster video, whose failure to adapt to customer feedback ultimately opened the window for Netflix to reinvent the movie rental market.

But too narrow a focus on exploring innovative new business models could equally expose the organization to excessive risks that may not achieve commercialization, and threaten the core business survival.

This juggling between the strategic need to balance the ‘here-and-now’ with the ‘there-and-then’, known as *organizational ambidexterity*, poses a significant leadership challenge in business today.

Ambidextrous organizations are able to straddle between meeting current customer needs and adapting to a future that might require significant business transformation. They recognize that there is equal value in managing the present, with all its inherent urgency, while also preparing for the future, critically important to long-term sustainability. As Dr. Stephen Covey once said, “*things that are important must never be at the mercy of things that are urgent.*”

A common ambidextrous model is to run a separate innovation team, parallel to, yet distinct from, the existing core business. This team may be allocated dedicated resources including people, budget and infrastructure, reporting up to a central leadership team that also manages the core business.

A variation to this model highlights the importance of integration and collaboration between the core and innovation business streams. Rather than enforcing separation between the two streams and relying on a senior leadership layer to filter or integrate outputs, functional counterparts interact directly to exchange ideas and achieve better and faster long-term alignment.¹⁷¹

In Vijay Govindarajan’s *Three Box Solution*, ambidexterity is discussed as having three dimensions (boxes) that define the competing agendas in ambidextrous organizations and lay a pathway for them to operate in tandem:

- *Box 1:* managing the current business model to optimize profitability and include incremental, or linear, innovation
- *Box 2:* letting go of past mindsets, beliefs and habits that potentially blind the organization to opportunities
- *Box 3:* investing in the future business model to maintain competitive positioning and reinforce sustainability with a focus on radical, or non-linear innovation.

Ambidextrous Organization

The ability to succeed in both a core current business model and a future model that involves significant innovation.

From a human resources perspective, ambidexterity presents a significant set of challenges. The types of skills, mindsets and culture that characterize the core business (Box 1) may differ substantially from what is required or valued in the innovation team (Box 3). The potential for dysfunction is there: competition for resources, diffusion of leadership bandwidth and prioritization conflicts, can destabilize efforts and outcomes. Time horizons and productivity expectations are also likely to vary between the groups, challenging perceptions of contribution and value to the business.

Yet HR is strategically placed to proactively craft the conditions for a successful ambidextrous operation by foreshadowing the potential and the obstacles and laying the appropriate foundations for success.

HR - Innovation Catalyst

Disruption, uncertainty, opportunity. Perfect conditions for innovation. From what we buy and build, to how we work and live, to who we accept as leader of our teams, organizations and nations. The demand is for *fresh*.

Fresh ideas, ways and means. We are up for change, open to novelty, ready for reinvention.

At the center of innovation are creative minds and talented individuals with vision and drive. Organizations are full of them. Yet few have realized their potential. To turn on the tap of organizational innovation, the right conditions must prevail. When they do, a *culture of innovation* presides, drawing in creative talent and turning out innovative solutions.

Hence the current trend to *democratize* innovation. To take it out of the hands and heads of a few and give it to many. To seek and reward innovations large and small, incremental and breakthrough, in every facet of the business, every day.

HR can be the catalyst for a culture of innovation. By drafting the architecture of the organizational culture, HR's contribution to innovation by design can be significant.

That said, as it stands, HR has a sub-optimal track record for building innovation cultures. A recent survey highlights the challenge, with only:¹⁷²

- 48% of respondents believing their organization promotes entrepreneurship and risk-taking
- 54% of companies having a process for submitting new ideas
- 50% reporting that HR is playing an active role in driving innovation, and
- 38% having approaches that recognize and reward innovation and risk-taking.

Clearly there is significant upside potential for organizations to create more innovative cultures, and for HR to play a guiding role.

HR themes for innovation

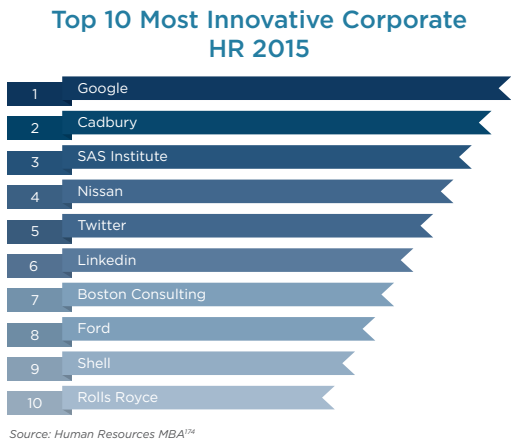
"Today, the business of innovation moves at lightning speed, is not constrained by international boundaries, and is limited only by the extent of one's imagination."¹⁷³

Vikrum Aiyer
Chief of Staff, U.S. Patent and Trademark Office

What does innovation in HR look like?

Which organizations are doing it well?

Organizations that stand out as innovators are also frequently named as employers of choice. There are many rankings, lists and awards each year that recognize companies that are highly innovative and achieve this through exceptional HR practices, including Fortune,¹⁷⁵ Workforce.com,¹⁷⁶ Glassdoor¹⁷⁷ and Great Place to Work.¹⁷⁸



Building a Culture of Innovation

1	Create an exceptional work environment and innovation will follow.
2	Allow space and time for creativity and innovation to thrive.
3	Create autonomy through trust and empower leaders at all levels.
4	Create a caring, collaborative workplace where employees feel safe to innovate.
5	Invest in continuous learning and challenge the status quo.

Here are some key themes that organizations use to inspire innovation through human resources practices and examples of organizations applying them.

1. Create an exceptional work environment and innovation will follow.

Google

The philosophy at Google is to put the employee experience on a pedestal, get out of the way and let innovation happen. Consistently viewed as one of the best places to work in the world, Google’s emphasis on crafting the workplace conditions in which exceptional talent can thrive is at the heart of its offering: in its Mountain View, California headquarters, Googlers access state-of-the-art sporting facilities, wellness centers and cafes.

Hyatt Hotels

Combining employee perks such as complimentary hotel stays, healthy low-cost meals, free dry-cleaning, relaxation lounges, plus flexible hours that allow housekeeping staff to begin work at hours that suit them, and social programs that support networking across diverse groups. Hyatt Hotels aim to build loyal relationships with employees around the world and create a rewarding work experience.

2. Allow space and time for creativity and innovation to thrive.

LinkedIn

Work hard, play hard is the mantra at LinkedIn where HR promotes a highly social environment with regular corporate parties and events that ensure employees balance the need for achievement with having fun. LinkedIn has a monthly *InDay* during which employees set aside their regular work to focus on new ideas and innovation.

Atlassian

A rolling campaign of innovation occurs through software development company Atlassian’s *ShipIt* initiative, in which self-formed teams generate novel ideas and compete quarterly with their colleagues around the world for bragging rights. ShipIt gives employees freedom to collaborate with whom they wish on projects they choose, generating an endless stream of creative software products, many of which have spawned larger projects that have led to commercialized applications.

3. Create autonomy through trust and empower leaders at all levels.

SAS Institute

The university campus feel of the SAS headquarters inspires employees to create the future and achieve their potential. A focus on the ‘whole person’ underpins a commitment to both the physical and psychological well-being of employees with extensive fitness, recreation and well-being programs. SAS leaders are also noted for building a high-trust culture that encourages open experimentation and promotes creative innovation.

Nissan

Innovation is driven at Nissan by placing autonomy and accountability in the hands of its leaders and managers, enabling them to recruit and develop their own teams without prescriptive centralized doctrines. Transparency over remuneration highlights the organizational philosophy of openness and continuous improvement.

4. **Create a caring, collaborative workplace where employees feel safe to innovate.**

Mayo Clinic

A strong emphasis on communication and patient and employee well-being underpins a supportive culture that humanizes the work experience and optimizes both intrinsic and extrinsic rewards.

Oxfam

Building strong social and community connections reinforces the strong sense of purpose that attracts and retains talent at Oxfam. These connections are equally developed internally to foster trust, appreciation and valued relationships, that encourage employees to share new ideas and collaborate to implement them.

5. **Invest in continuous learning and challenge the status quo.**

Twitter

Dynamic growth sectors with a high proportion of young Millennials in their workforce need a dedicated commitment to accelerated development for employees and leaders to support them to succeed. This has been a key focus at Twitter, where new employees receive a thorough and personalized onboarding experience ('Yes to Desk') and continuous access to learning throughout their career.

AT&T

Investment in corporate universities (both bricks & mortar and online variations) has experienced a resurgence in the last decade as organizations aim to bridge the skills-readiness gap unfilled by the education sector. AT&T University is led by company executives and aligned with educational institutions to deliver first-class technical and managerial programs, including its popular self-paced fast-track technical nanodegrees.

Mixing the right cocktail of initiatives that build and retain a culture of innovation is a unique challenge for each organization. It happens by design, not by chance, and should be a primary focus of contribution by HR.

HR levers to promote innovation

"The penguins were not always wise, they were not always popular, but they were always IN CHARGE."

BJ Gallagher

Author: *A Peacock in the Land of Penguins*

Back in 1995, BJ Gallagher published the first edition of *A Peacock in The Land of Penguins*, the charming story of Perry the Peacock, an enthusiastic and creatively talented bird, hired to work in the Land of Penguins. The penguins all looked alike, thought alike and acted alike, and despite Perry's great work, it soon became evident that he did not fit in. Attempting to make him more like them, the penguins gave Perry a penguin suit, but Perry just felt increasingly disheartened and devalued. Ultimately, Perry left the Land of Penguins to join the colorful, diverse and innovative birds in the Land of Opportunity, wherein, of course, he thrived.

Fables such as *A Peacock in The Land of Penguins* serve as poignant reminders of the seductive pull of individual comfort zones and homogenous organizational cultures that reinforce the status quo, make us withdraw from the threat of change, and discredit innovative ideas and people. In the digital world, the penguins are doomed: many have already succumbed to the disruptive forces unleashed by a new flock of digital peacocks.

Innovation once sat squarely in the R&D departments of organizations, where it was the job of a relatively small group of people to uncover breakthrough ideas and products. In fact, the role of traditional R&D is undergoing its own reinvention, as it becomes an increasingly global challenge (the most notable growth being in Asia) and the disconnect between R&D spending and innovation outcomes becomes increasingly apparent (PwC's top 10 innovators continue to outperform the top 10 R&D spenders).¹⁷⁹

Today, innovation resides in no single individual, team or department: it is a chameleon that can manifest itself anywhere, or nowhere, depending on the conditions and the players. And it is the conditions and the players that HR can best influence to facilitate organizational innovation.

To catalyze the organization for innovation, HR must optimize two levers:

- innovative context
- innovative players.

Innovative context

The context for creative and divergent thinking is found in organizations that promote innovative conditions by:

- valuing flexibility, diversity, risk-taking and accelerated learning
- creating a physical and psychological environment that promotes collaboration, ideation and challenge
- embracing the reality that true innovation brings with it successes and failures, small wins and profound breakthroughs
- openly recognizing and rewarding both innovation efforts and outcomes
- promoting relentless learning as an organizational staple.

While HR cannot own organizational culture, it can influence it significantly by working to infuse the conditions within which a culture of innovation can thrive.

Innovative players

Innovation is a human endeavor. Bringing the right people together has often been the catalyst for great innovation. Not every player needs to be an innovator – in fact, many will play a critical supportive role (such as challenging ideas or removing obstacles), so innovation is often the result of collaborative efforts, as teams spark off each other. Essential to getting the players right is:

- having leaders that authentically support and actively drive innovation
- recruiting heterogeneous employees with fresh and diverse perspectives
- balancing the need to allow innovation free space, time and natural collaboration with enough focus and structure to ensure innovative ideas and projects are relevant and commercial
- challenging individuals to continuously improve their skills and embark on broad experiences to stretch their capabilities.

These levers put HR in a powerful position to drive the organization’s ‘innovation engine’. To mobilize this engine:¹⁸⁰

- **organizations** must foster a culture of innovation in a physical habitat that rewards experimentation and failure, and provide access to the resources people need; and
- **individuals** must bring an attitude of confidence and drive, knowledge, expertise and imagination to channel their creativity into innovations that benefit the organization.

Innovative Players have:	Innovative Contexts have:
Attitude	Culture
Knowledge	Resources
Imagination	Habitat

Tomorrow’s innovations are being nurtured now, by creative players in inspiring cultures. Some will be organizations we know today that have mastered innovation, others will be new unicorns that emerge from the shadows.

The penguins will be gone.

Transcending Disruption: 3 Ways to Pull Yourself into the Future

Yvette Montero Salvatico

Managing Director, Kedge

Yvette's corporate background with Kimberly-Clark and The Walt Disney Company precedes her leadership role at Kedge, where extensive research and customized toolkits service a diverse global client base in strategic design, foresight and innovation. Yvette is also a Founding Instructor at The Futures School.



Early in the 20th century, Austrian-born economist Joseph Schumpeter coined the phrase “creative destruction” to describe the disruptive process of ongoing technological and economic innovation within capitalism. In his day, theories of disruption were developed to describe the cycles of change that were a part of normal market forces. Little did Schumpeter know that the landscape of business in the early 21st-century would be dominated by ever-shorter intervals of volatile disruption that would radically redefine the very concept of “normal.”

Today, we live in a world where creative destruction is happening faster than we can react. Whether the radical changes are in products, services, experiences, technology or organizational models, we seem to have entered an age of perpetual instability in business and society where the new mantra is “disrupt or be disrupted.”

Today's leaders generally espouse one of two views about disruption. Some see the concept as a glorified buzzword that is used mainly by Silicon Valley start-ups looking to create unique solutions to non-existent problems. In this view, disruption is not organic, but manufactured, attacking continuity for the sake of change and the hope of being the next unicorn. Others see disruption as a natural consequence of our age of increasing complexity, but view it as a force that is “pushing from the outside” – effectively bullying organizations into upending their present-day offerings or approaches. This mindset causes leaders to be reactive in the face of accelerating changes in business and society.

What if we could create a third view of disruption that enables us to build future-oriented organizations that aren't constantly in the act of chasing or being chased? To build such a proactive culture, we need to look beyond the present research – which is mostly concerned with recognizing where disruption is coming from or how to avoid it. Though such research is important, it leads us to a reactionary response that is based in risk and fear. Transcending disruption in an age of increasing complexity means that we must change our organizational focus: instead of fixating on the idea of disruption “pushing from the outside,” we must adopt a new mindset of “pulling” our organizations towards disruption. Whereas being pushed by external forces puts leaders constantly on the defensive, the concept of pulling your firm towards something puts you in the driver's seat.

In the Schumpeterian language of creative destruction, a focus on having something pushed upon us is akin to approaching the process of disruption from the “destruction” side: What is being destroyed? Who is causing the destruction? How can I be the first to deconstruct or dismantle existing products, services or models?

Conversely, an organization that focuses on pulling itself towards destruction can harness the creative aspects of Schumpeter's theory: What opportunities are we yet to recognize? How can we move beyond our present capabilities? How can we become more adaptive, resilient and transformative? This is not to say that both sides of the equation aren't important, but focusing only on the destruction side of disruption leaves organizations weakened and vulnerable.

Three approaches empower us to transcend disruption and embrace a mindset of pulling ourselves – and our organizations – to the outside.

1. Speculative Inquiry

This is the practice of continually learning, unlearning and relearning in order to “disrupt disruption.” Speculative Inquiry helps us to unlearn and relearn by launching us past public-facing knowledge and ideas, traditional competitive or business intelligence, present-day issues and pervasive technologies. Instead, the leaders and organizations that desire to transcend disruption are looking for provocative futures and far-reaching breakpoints of change – emerging possibilities and alternatives that result from the collision of today's environmental and horizon-scanning efforts. These possibilities aren't identified through fanciful brainstorming exercises, but rather are the result of pattern recognition methodologies and tools – the clustering of trends, shifting values, implications and the subsequent new landscape of change that help us to “recolonize” the future and make sense of the world of tomorrow. Once identified, it is the tension between this speculative scanning and the immediate core competencies of the organization that creates a

middle ground of transcendent “futures intelligence” that can reveal new strategies, innovations, platforms and models.

2. Multi-Faceted Strategy

It has been noted that whenever we make a decision, we kill every future except one. Our mechanical view of organizational development has taught us that we must choose one “official future” from among many possibilities, and tie our fortunes to that one decision. However, McGill Professor Henry Mintzberg has said, “Planners should make their contribution around the strategy-making process rather than inside it. They should supply the formal analysis or hard data that strategic thinking requires, as long as they do it to broaden the consideration of issues rather than to discover the one right answer.” Multi-Faceted Strategy is a process by which we include multiple alternative futures in every one of our decisions, making our strategy and actions agile, elastic, adaptive and transformative. Beginning with the long-range aspirations, goals and opportunities that an organization has identified, we can compress and synthesize these actions and ideas into a robust strategy. In this way, organizations are able to pull themselves to the outside to design transformational vision and new core capabilities.

3. Higher-Order Purpose

The last approach needed to transcend disruption is the identification of the higher-order purpose of the organization. Each business or social entity contains not only the seeds of greater potential, but also of greater mission and aspirational ability. Discovering that purpose and pulling yourself towards it requires the mapping of transformational growth curves that begin with your organization’s nascent competency and ascend through multiple breakpoints and breakthroughs. Those breakthroughs and higher-order purposes are inherent in the DNA of your products, services and models, but don’t look like glorified versions of the original that have simply been teased out through incremental iterations. Instead, each breakthrough leads to new complex manifestations of the original, and opens the organization to new ways of seeing itself and unique opportunities to pull itself to the outside.

As organizations move past the concepts of top, bottom and lateral disruption to a more liberating and empowering mindset of transformation, they will find that the “unknowns” that once pushed them from the outside will instead become their greatest assets. If we learn to intentionally pull ourselves to the outside – and pull the outside into our organizations – we can foster a creative force beyond what Schumpeter could have possibly imagined.

Valuing the Chaos of Innovation

Stacey Harris

Vice President, Research & Analytics,
Sierra-Cedar



A leading member of the HR practices and technology research community since 2007, Stacey launched Bersin & Associates HR research practice before joining Sierra-Cedar in charge of Sierra-Cedar’s Annual HR Systems Survey and Research function.

In an era of intelligent systems, self-driving cars, and personal tracking devices, the topic of innovation is permanently tied to major technological advances. The idea of bigger, faster, and more advanced computer technology seems like the ultimate goal; with innovation driving us ever onward. Yet, the greatest innovations still to be achieved are distinctly lacking in technological focus – particularly in the arena of human resources.

HR technology may provide a support mechanism for many of these innovations, but the areas of real ingenuity are more likely to come from organizational design, health and wellness, or community mobilization models. Research areas such as neuroscience, psychology, and behavioral decision-making may become more critical to tomorrow’s HR innovations than specific technical skills are today. If those research areas make you a bit uncomfortable and nervous, that is OK, because real, life-changing innovations, are generally outside of the comfort level of everyday organizations.

“In reality, Innovation is messy, painful, and beleaguered with years of failure.”

The allure of innovation feels endless. It is placed upon a pedestal like a shining beacon of hope. Our books and movies are filled with tenacious innovation heroes: Jobs, the Wright Brothers, Edison, Da Vinci, or Marie Curie – each honored for their pioneering spirits and life-changing innovations. When the idea of innovation is only viewed through the rose-colored lens of success, it is easy to see why so many organizations aspire to be seen as innovative organizations.

In reality, innovation is messy, painful, and beleaguered with years of failure. Early innovators are often lost to time. They have names like Siegfried Marcus, a little-known inventor from Vienna who created a “mobile internal combustion engine” – the world’s first automobile. Those first “out-of-the-box-thinkers” are often mocked for their initial efforts, scorned for their lack of traditional values, even shunned for the heresy of their new beliefs, and often lack the funding required to support their work. Behind each great name connected with a major innovation that was finally mainstreamed and accepted, you’ll find a line of less accepted innovators paving the way before them.

Real innovation creates chaos and turmoil; it challenges traditional work and hierarchies; it raises questions, it is inefficient and costly. When most organizations aspire to build a culture of innovation, it is rare that they understand what this truly entails. A culture of innovation, or more aptly put, an environment where innovation thrives, is one that understands and embraces the chaos of innovation, and values the process as much as the outcome.

Each year the Sierra-Cedar Annual HR Systems Survey, identifies organizations seeing strong improvement in desired business outcomes, including the ability to be innovative. Those organizations that rank the highest on innovation metrics share a unique mix of characteristics providing a picture of the behavior of organizations focused on innovation. We also identified characteristics that weren’t unique about these organizations.

“For innovative organizations, their HR functions were 40% more likely to be viewed as contributing strategic value.”

High ranking innovation organizations were not defined by employee headcount; we found no connection between size and increased innovation. Nor was there a connection found in plans to increase or decrease HR technology budgets, or investments in any one particular type of HR technology or deployment model. What we did find was considerably more interesting, and points to factors that often challenged early inventors’ ability to achieve tangible outcomes.

High ranking innovation organizations were much better at handling social responsibility issues. These organizations were 25% more likely to be ranked as having excellent capabilities when addressing areas such as diversity and inclusion, pay equity, contingent workforce management, and flexible schedules. These organizations were also more likely to have an equally spread workforce across generations, versus a predominantly mature or young workforce. They also had lower than average voluntary turnover rates across the aggregate survey respondents as well as across their peer industries.

For innovative organizations, their HR functions were 40% more likely to be viewed as contributing strategic value over those strictly viewed as compliance focused, and were more likely to leverage workforce data at the enterprise level to support decision-making across their HR function.

Although innovation seems like a lofty goal, it is fair to say that not every organization needs to chase the life-changing innovation environment required to achieve major new outcomes. Generally, systems and organizations run more efficiently when they manage their business through incremental change and transparent cultural expectations. Incremental change may not be as popular as catching the innovation wave, but it is a more viable short term business model.

“HR has a critical role to play in the enterprise-wide discussions concerning innovation.”

Watching the trends carefully, and taking advantage of market changes through acquisition, divestitures, focus, and staff augmentation can create a profitable business for a very long time. If an organization feels that it is a necessary sustainability goal that they become a highly innovative organization, they need to clearly set expectations for the environment they are building. These are organizations that:

- mix diverse thinkers with different cultural and experiential backgrounds and expect, and are prepared for, internal conflicts to arise
- give independent and collaborative thinkers equal space and time
- celebrate failure as much as success; and quickly model and iterate concepts and ideas
- encourage experimentation but provide structure for quick decision-making and idea mainstreaming
- fund innovation and its multiple failures as deeply as they fund their key business areas, if they have the resources
- empower employees with the freedom to rethink the work and how to accomplish the goals if they have a lack of resources, creating environments where necessity is the truly the mother of invention.

Most importantly, they manage the risk realities of innovations versus fearing the lack of outcomes.

If developing an environment that embraces innovation seems a step too far for an organization, some choose to create separate stand-alone functions or even fund separate companies that become the innovation incubators. If given autonomy, but still included in the critical feedback process of a transparent organization, these innovation arms can be valuable – as long as they don't work in a bubble or limit the pollination of ideas.

These types of organizations can provide opportunities to cycle talented employees from primary businesses to innovation environments and reduce the risk of losing developing talent due to burnout or lack of advancement opportunities. They often provide reduced risk, but are not completely risk free. They might have additional funding beyond the initial corporate investment. In some cases, organizations create corporate venture capital funds where major investments are made into existing innovative start-ups, with the idea that over time viable innovative organizations will succeed and become valuable assets of the investing organizations.

*"No matter where innovative ideas are coming from,
HR can help prepare both management
and employees for the coming changes."*

In each of these models, HR has a critical role to play in the enterprise-wide discussions concerning innovation. All our innovation heroes needed a mechanism for mainstreaming their new ideas and putting them into action. HR can advocate for reality, providing leadership with an honest view of whether an organization's environment will nurture innovative ideas. No matter where innovative ideas are coming from, HR can help prepare both management and employees for the coming changes.

When HR takes a strategic role in their organization, then they aren't simply reacting to requests for change but rather facilitating the innovation and preparing for the chaos, risks, and hopefully the eventual growth from innovative ideas.

This year, Sierra-Cedar HR Systems Survey research found that publicly traded, high-ranking innovation organizations financially outperformed their peers, and were more likely to be talent or data-driven HR organizations. Innovation is necessary for long-term sustainable business outcomes, but there isn't a single right way to be an innovative organization. The conversation isn't about using or creating innovative technologies or applications – but rather about creating an environment of trust where customer challenges can be viewed through the chaotic lens of innovation and, like a kaleidoscope, hopefully turning our world upside down into something of rare beauty.

The Great Debate

“The HR function is critical in the future of work”

An enormous weight rests on the human capital of organizations trying to steer a course in the digital world. The ability of business to channel the digital promise into products, services and experiences that the world wants and needs, surely calls for passionate, talented people doing awesome innovative work. This should be the obvious setting for HR to stake its claim as business-critical, yet the function continues to defy gravity and shimmy above the real action.

Over the course of the three Talent Labs covered in this book, involving hundreds of interviews with HR executives and thought leaders, research white papers, blog posts and social listening, we conclude that the future of HR is up for debate.

To be sure, HR is acutely attuned to the voices of its detractors and, indeed, is possibly its own harshest critic. Both introspection and external evaluation of HR arrives at a comparable assessment: *Needs Improvement*.

In HR's defense, it is a tall ask to definitively reinvent a function that serves a business that is itself in a state of flux due to the seismic shift in the global landscape. Notwithstanding, all business functions find themselves faced with parallel challenges, yet few seem to question the future relevance of say, Marketing or IT.

There's nothing like a good debate to put some compelling and (hopefully) objective intellectual rigor to a challenge posed. We present here a summation of the key arguments for and against the debate topic, that *the HR function is critical in the future of work*.



On the
Precipice

The Arguments FOR

Theme: HR unleashes the value of human capital to drive business performance.

The Strategic Focus Argument	<ul style="list-style-type: none"> Human capital is a strategic organizational asset that requires strategic forecasting and workforce plans. Alignment of human capital objectives and the organization's goals requires strategic oversight and cross-functional integration. Only HR has a holistic view over the organization's entire human capital base, which risks becoming fragmented and ineffective in the absence of strategic focus.
The Business Performance Argument	<ul style="list-style-type: none"> Independent studies consistently show that organizations which lead with human capital strategies outperform the market. The leadership triad of CEO, CFO and CHRO is an especially powerful alliance in driving organizational performance.
The Human Experience Argument	<ul style="list-style-type: none"> Increased digital automation reduces the need for HR's involvement in people processes but heightens the need for creating an engaging and authentic employment experience. As culture and talent underscore innovation, HR plays a crucial role in creating an environment that promotes and accelerates creative and divergent thinking.
The Expertise Argument	<ul style="list-style-type: none"> Human resources, like marketing, finance and IT, is a professional domain that requires subject matter expertise for effective execution. Hardly a 'soft skill', HR represents a complex balancing between the diverse personal and professional aspirations of individuals with the vision and mission of the organizations in which they are employed.
The Business Support Argument	<ul style="list-style-type: none"> An effective HR function allows the business to get on with business. People are high maintenance assets compared with machines, and an effective centralized HR support unit minimizes business distraction, accelerates onboarding and speed-to-productivity, and provides a neutral voice in the event of employee disputes and workplace issues.

The Arguments AGAINST

Theme: Human capital is critical in the future of work; but an HR function is not.

The Efficiency Argument	<ul style="list-style-type: none"> The automation of HR administration, uptake of self-service functionality and devolution of talent management ownership to line managers, sets the groundwork for the HR function to eventually dissolve.
The Complexity Argument	<ul style="list-style-type: none"> HR's contribution has served to make people leadership and talent management increasingly complex through excessive and over-engineered policies and processes that have become a self-serving end in themselves. Business managers are overwhelmed by HR processes, many of which retain a strong element of administrative compliance and policing.
The Value Argument	<ul style="list-style-type: none"> Years of trying have failed to materialize demonstrable HR value-add to organizational performance. Business metrics can and should be set and tracked by finance and operations functions.
The Relevance Argument	<ul style="list-style-type: none"> A multidisciplinary team of experts in finance, IT and marketing could complement operational managers in decentralized teams to deliver human capital business outcomes that elevate focus and expertise and eliminate unnecessary process. In this case, a dedicated HR function becomes irrelevant.

No doubt, you have your own opinion. Notable in this dialogue were the many contributors who found themselves sitting squarely on the fence. If-Then arguments are frequently made when both observers and practitioners view the scenario.

*If HR can deliver business outcomes via a strategic human capital contribution, **then** it is critical.*

Understandable. It seems to defy reason that the function charged with oversight of arguably the most expensive and potentially most productive organizational asset, is anything but the most important and strategic function in the business. Yet here we are, arguing its justification for existence.

Something has gone seriously awry and it behooves HR now to take a stand and demonstrate its own purpose and potential.

There should be no debate.

Key Messages

On the precipice, this is the scene.

Before us, a blue sky of boundless opportunity, brought within reach by the progress of the last century and the possibilities of the next.

Below us, a chasm of unknown depth and dark with uncertainty, that triggers apprehension and threatens to overwhelm us.

Suspense. What happens next?

Cliffhanger

A situation or contest of which the outcome is suspensefully uncertain up to the very last moment.

Dictionary.com

Key Message 1	<p>Disruption: A new world of work is on the doorstep.</p> <p>The features and characteristics of the future of work are fast revealing themselves: there is little mystery about the imminent changes to the workforce or the workplace. And it is a dramatic shift from the past.</p>
Challenge for HR	<p>A quantum shift in mindset and skills.</p> <p>A new breed of HR will succeed in this evolving landscape. Commercially minded professionals that bring digital, cultural and business intelligence will be required to concurrently optimize the employee experience and contribute to organizational performance.</p>
Key Message 2	<p>Technology: Get ready for an unprecedented technology explosion.</p> <p>We have reached an inflection point wherein the combinatorial impacts of cloud, mobile, social and IoT technologies will unleash a continuous wave of advanced digital software and hardware that will touch, and in many cases, reshape, everything we do.</p>
Challenge for HR	<p>Master technology tools that unleash human capital performance and potential.</p> <p>Mastery of new technologies will require curiosity, immersion and agility to determine what to implement and what to ignore. Early adoption will be a competitive differentiator in securing talent but frequent adaptation will be necessary.</p>

Key Message 3	<p>Relationships: New laws apply.</p> <p>Last century's relationship between employers and their workforce has all but disintegrated. Out of the dust rises a new fluid work dynamic based on two-way deals between talent seekers and talent owners that bring a balance of power to trade in the labor market.</p>
Challenge for HR	<p>Craft an employment proposition for the 21st century.</p> <p>Business and the labor market share a common need for flexibility: business to drive innovation and remain resilient to market changes; labor to manage personal and professional aspirations. HR will be pivotal in creating the workplace conditions conducive to meeting these dual demands.</p>
Key Message 4	<p>HR in business: Rethinking business means reshaping HR.</p> <p>The business environment is unpredictable and increasing layers of complexity have led to the redundancy of past business models and the best practices associated with them. HR is both a driver and a passenger in this reinvention scenario.</p>
Challenge for HR	<p>HR must be the change.</p> <p>In a state of flux, HR is instrumental in transitioning organizational structure and culture to position the business for success. But it does so at a time in which its own transformation is in top gear. Cast fresh digital eyes on HR and show cause for the retention of existing HR policies and practices.</p>
Key Message 5	<p>Innovation: the new black.</p> <p>The digital genie is out of the bottle. There is no battle to be won, rather a new and uncertain journey to which business and the workforce must adapt through agile innovation. On a staple diet of unceasing innovation, people and communities will create a new world, to live in and to work in.</p>
Challenge for HR	<p>Set the foundations in which innovation flourishes.</p> <p>Work itself will continue to be redefined and HR must be the protagonist of its reinvention. Organizations will encounter unprecedented competition from unexpected sources and require foresight and creative ingenuity to succeed, instrumental to which will be human capital.</p>

We can marvel at the world we have created. Soon we will be surrounded by, and augmented with, advanced technologies that engage all our senses and change the entire nature of the human experience.

Within reach is transformational progress in science, technology, medicine, energy production, environmental protection and even space exploration that carries the possibilities of longer, healthier lives, greater equality and connectivity, a more sustainable planet and abundance where there was scarcity.

What it means to work in this future depends on us. Whether we work more, less, or differently, will be a function of the new world of work and our individual choices.

In this world, HR might just be the most important organizational lever for optimizing talent resources and tapping human innovation potential.

Conversely, HR may slip into a chasm of irrelevance, increasingly disconnected from business and the talent market.

Or something, somewhere in between.

However you view it, HR is on the precipice.

Its future, a **CLIFFHANGER**.

About the Authors

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Sylvia is Senior Vice President – Global Research at PageUp. With 25 years of experience as a senior talent management and human resources practitioner and consultant, her career has included corporate finance and HR roles at Citibank and Westpac. Sylvia was Founder and CEO of consulting firm Talent Edge, specializing in bespoke leadership development and talent management solutions.

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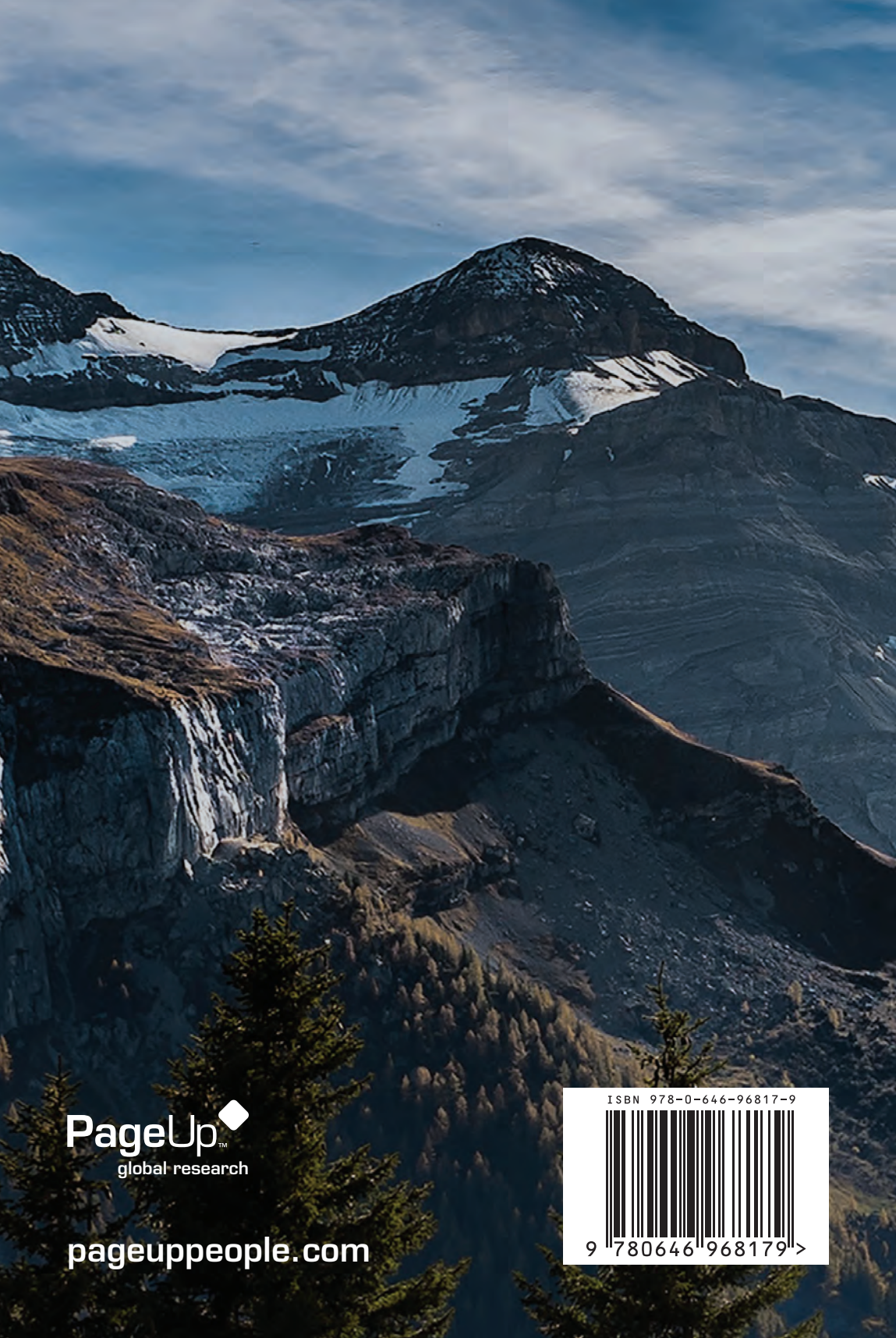
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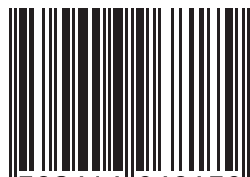
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ISBN 978-0-646-96817-9



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