Enhancing Eye Care Through Effective Mentoring

Recruiting and Contracting – *an organizational approach*

Agenda

- Workforce of the future – culture, people, skills and partnerships
- Recruiting – for talent + values
- Contracting – facilitating shared values

Technological breakthroughs
Rapid advances in technological innovation

Automation, robotics and AI are advancing quickly, dramatically changing the nature and number of jobs available. Technology has the power to improve our lives, raising productivity, living standards and average life span, and free people to focus on personal fulfilment. But it also brings the threat of social unrest and political upheaval if economic advantages are not shared equitably.

Demographic shifts
The changing size, distribution and age profile of the world's population

With a few regional exceptions the world's population is ageing, putting pressure on business, social institutions and economies. Our longer life span will affect business models, talent ambitions and pension costs. Older workers will need to learn new skills and work for longer. 'Re-tooling' will become the norm. The shortage of a human workforce in a number of rapidly-ageing economies will drive the need for automation and productivity enhancements.

Rapid urbanisation
Significant increase in the world's population moving to live in cities

By 2030, the UN projects that 4.9 billion people will be urban dwellers and, by 2050, the world's urban population will have increased by some 72%[1]. Already, many of the largest cities have GDPs larger than mid-size countries. In this new world, cities will become important agents for job creation.

Shifts in global economic power
Power shifting between developed and developing countries

The rapidly developing nations, particularly those with a large working-age population, that embrace a business ethos, attract investment and improve their education system will gain the most. Emerging nations face the biggest challenge as technology increases the gulf with the developed world; unemployment and migration will continue to be rampant without significant, sustained investment. The erosion of the middle class, wealth disparity and job losses due to large-scale automation will increase the risk of social unrest in developed countries.
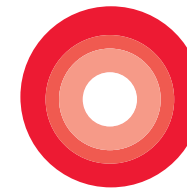
Resource scarcity and climate change
Depleted fossil fuels, extreme weather, rising sea levels and water shortages

Demand for energy and water is forecast to increase by as much as 50% and 40% respectively by 2030[2]. New types of jobs in alternative energy, new engineering processes, product design and waste management and re-use will need to be created to deal with these needs. Traditional energy industries, and the millions of people employed by them, will see a rapid restructuring.

Find out more about PwC's Global Megatrends http://www.pwc.co.uk/megatrends

1 UN Department of Economic and Social Affairs. http://www.un.org/en/development/desa/population/publications/pdf/urbanization/WUP2011_Report.pdf
2 National Intelligence Council. https://www.dni.gov/files/documents/GlobalTrends_2030.pdf

How digital and artificial intelligence are changing work

The potential for digital platforms and AI to underpin and grow the world of work is unbounded. They already play an essential role in the development of all Four Worlds of Work, matching skills to employer, capital to investor and consumer to supplier.

This platform layer brings a digital value chain and commoditisation and automation of the back office – but comes with warnings. While it can create a thriving marketplace, it can grow to take over the entire economic system. And with platform pervasiveness comes vulnerability to cyber-attacks or wide-scale manipulation.

Closely linked to digital is data. How governments, organisations and individuals decide to share and use it is key to all our worlds – even the most human-centric.

Finally AI: the digital assistants, chatbots, and machine learning, that understand, learn, and then act based on that information[3]. It's useful to think of three levels of AI:

Assisted intelligence, widely available today, improves what people and organisations are already doing. A simple example, prevalent in cars today, is the GPS navigation programme that offers directions to drivers and adjusts to road conditions.

Augmented intelligence, emerging today, helps people and organisations to do things they couldn't otherwise do. For example, car ride-sharing businesses couldn't exist without the combination of programmes that organise the service.

Autonomous intelligence, being developed for the future, establishes machines that act on their own. An example of this will be self-driving vehicles, when they come into widespread use.

Some optimists believe AI could create a world where human abilities are amplified as machines help mankind process, analyse, and evaluate the abundance of data that creates today's world, allowing humans to spend more time engaged in high-level thinking, creativity, and decision-making.

73%
think technology can never replace the human mind.

37%
are worried about automation putting jobs at risk – up from 33% in 2014.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US

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3 For more on AI and how it's changing work, see our 2017 report: Bot.Me: A revolutionary partnership http://www.pwc.com/CISAI

"Automation, machines are replacing so many jobs. Many people think that only the poor and uneducated are being displaced. I'm afraid that in a few years everyone will be replaceable."

Retired female with postgraduate degree (67), USA

Assisted Intelligence

Today

Automating repetitive, standardised or time-consuming tasks and providing assisted intelligence.

Increased demand for STEM skills to build new tech ecosystem.

Augmented Intelligence

Emerging

Fundamental change in the nature of work. Humans and machines collaborate to make decisions.

Uniquely human traits – emotional intelligence, creativity, persuasion, innovation – become more valuable.

Autonomous Intelligence

Future

Adaptive continuous intelligent systems take over decision-making.

The future of humans at work is questioned.

Shaping our own destiny

Megatrends provide the context for future worlds but they don't dictate their shape or features at a specific point in time. How humans respond to the challenges and opportunities which the megatrends bring will determine the worlds in which the future of work plays out.

Public sentiment, and its impact, is difficult to predict, affected by culture, history and many other local factors. As we've seen in recent years, public sentiment can radically affect the approach of a nation in the space of a single election or referendum. But there's no doubt that governments and public sentiment will influence the forces underpinning each scenario. For this reason, we added some distinctly human dynamics into our scenario analysis: the 'push and pull' effect of collectivism versus individualism, and integration versus fragmentation.
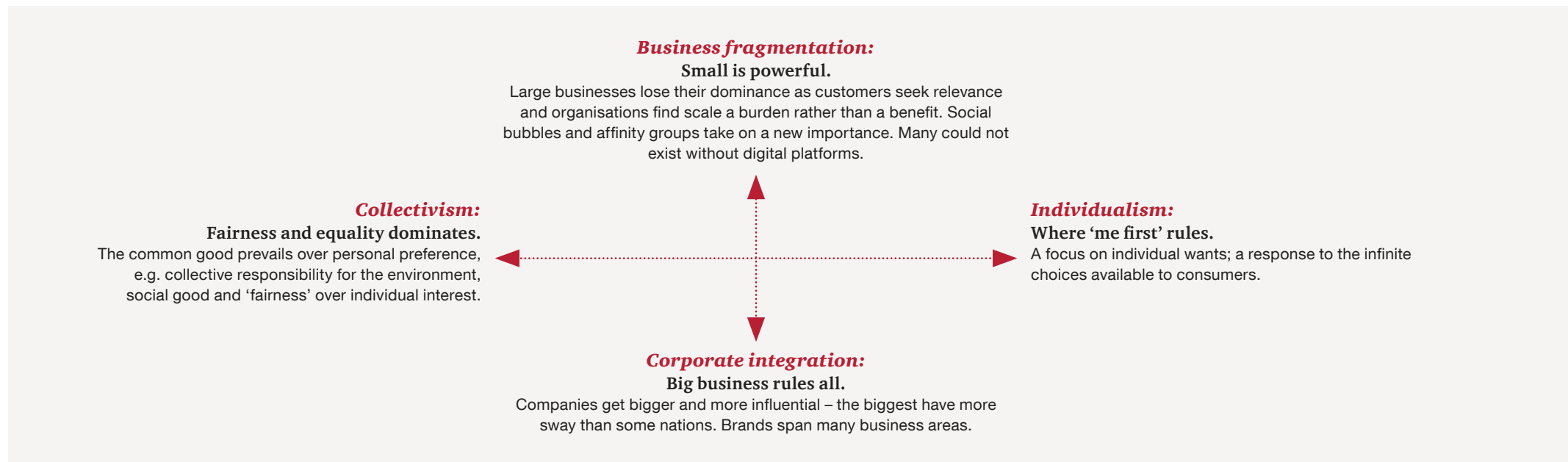
Collectivism versus individualism

Will 'me first' prevail, or will societies work together through a sense of collective responsibility? What is the role of government in balancing a strong economy with the interests of its people? Regions and countries – and even cities – will inevitably take a different view on the level of state intervention needed.

Integration versus fragmentation

Will digital technology inevitably mark the end for large companies? Technology has allowed tiny businesses to tap into a vast reservoir of information, skills and financing that used to be available only to large organisations. Through the use of technology, small has become powerful.

It's also allowed large companies to drastically reduce their internal and external costs. Organisations can be more productive with fewer staff and can expand their operations (through contingent workers, for example) without having to invest significant amounts of capital. But once again, human agency plays its part.

Government actions can incentivise or penalise larger businesses, or encourage small business and start-ups.

Business fragmentation:
Small is powerful.
Large businesses lose their dominance as customers seek relevance and organisations find scale a burden rather than a benefit. Social bubbles and affinity groups take on a new importance. Many could not exist without digital platforms.

Collectivism:
Fairness and equality dominates.
The common good prevails over personal preference, e.g. collective responsibility for the environment, social good and 'fairness' over individual interest.

Individualism:
Where 'me first' rules.
A focus on individual wants; a response to the infinite choices available to consumers.

Corporate integration:
Big business rules all.
Companies get bigger and more influential – the biggest have more sway than some nations. Brands span many business areas.

The Four Worlds of Work in 2030

Fragmentation

The Yellow World
Humans come first

Social-first and community businesses prosper. Crowdfunded capital flows towards ethical and blameless brands. There is a search for meaning and relevance with a social heart. Artisans, makers and 'new Worker Guilds' thrive. Humanness is highly valued.
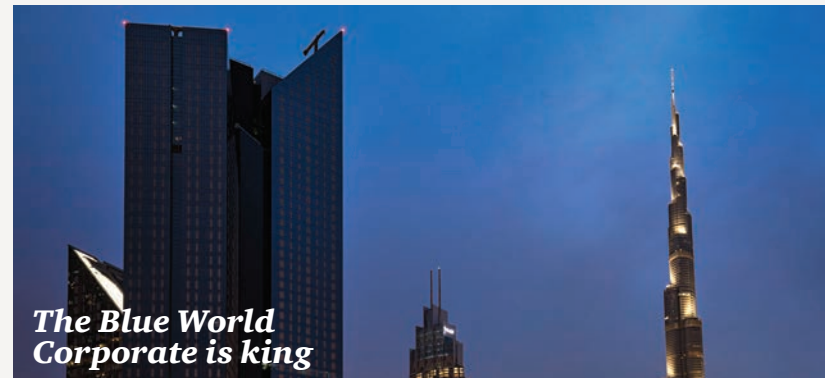

The Red World
Innovation rules

Organisations and individuals race to give consumers what they want. Innovation outpaces regulation. Digital platforms give outsized reach and influence to those with a winning idea. Specialists and niche profit-makers flourish.

Collectivism ◄ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ‒ ► **Individualism**

The Green World
Companies care

Social responsibility and trust dominate the corporate agenda with concerns about demographic changes, climate and sustainability becoming key drivers of business.

The Blue World
Corporate is king

Big company capitalism rules as organisations continue to grow bigger and individual preferences trump beliefs about social responsibility.

Integration

Innovation rules: The Red World

In a world with few rules, a vibrant market of specialists and niche profit-makers race to serve the needs of individuals and powerful affinity groups.

Red World: *The road to 2030*

2020

High-profile personal scandals and corruption by politicians and business leaders in a number of nations are unresolved, signalling to the world that 'anything goes' and creating a push back on turn-of-the-millennium standards.

2021

A lifestyle app developed by six Taiwanese 17-year-olds for their final-year exams is sold for $49m in a worldwide online auction organised by the students' school.

2022

UK Court of Appeal rules that ideas developed outside business hours by colleagues of the same company remain its intellectual property, even if the workers are not permanent employees.

2025

A decade of demergers and 'carve outs' across industry sectors peaks.

2030

The number of US workers in full-time 'permanent' employment drops to 9% of the workforce, an all-time low.

60%

think 'few people will have stable, long-term employment in the future'.

A world of innovation with few rules

The Red World is a perfect incubator for innovation.

New products and business models develop at lightning speed, far more quickly than regulators can control. Technology encourages the creation of powerful, like-minded, cross-border social 'bubbles'. Businesses innovate to create personalisation and find new ways to serve these niches.

There are high rewards on offer for those ideas and skills that best meet what companies and consumers want. But in a world with few rules, the risks are high. Today's winning business could be tomorrow's court case.

Agility and speed are essential

Big business has been outflanked in a digital-enabled world that's teeming with small entrepreneurial companies.

Digital platforms match worker with employer, skills with demand, capital with innovator, and consumer with supplier. This allows serial entrepreneurs to reach far beyond their size in terms of influence and scale.

Anxious to compete, larger employers fragment to create their own internal markets and networks to cut through old-style hierarchies and encourage and reward workers to come up with new ideas. The pace of development and testing of new products and services has accelerated, increasing the risk of brand damage and failure.

What it means for workers

Specialism is highly prized in the Red World and a career, rather than being defined by an employer or institution, is built from individual blocks of skills, experience and networks.

Near-zero employee organisations are the norm. Organisations of a few pivotal people use technology, the supply chain and intellectual property, rather than human effort and physical assets, to generate value.

The commercial value of learning takes precedence; a university degree is seen as less valuable than specific and relevant skills or experience.

Workers know that the most sought-after skills will mean the biggest reward package. Many move frequently and stay only as long as the project or business lasts. Contract negotiations are key and ownership of intellectual property and the freedom to work are as important as financial incentives.

Who leads on people strategy?

- Innovation and people are inseparable in the Red World.

- HR does not exist as a separate function and entrepreneurial leaders rely on outsourced services and automation for people processes.

- Larger organisations scour the world to 'acqui-hire' talent and intellectual property using specialist talent strategists in combination with AI to identify the specialists they want.

- Digital platforms match worker with employer and skills with demand.

- Performance is all about the end result rather than the process – 'old-fashioned' performance measurement and analysis is rare.

What does the workforce look like?

- Specialism is highly prized and workers seek to develop the most sought-after skills to command the biggest reward package.

- Organisations are typically stripped-down and nimble, supplemented by talent attracted by the next promising opportunity.

- A small number of 'pivotal people' with outstanding management skills command high rewards.

- Like-minded workers gravitate towards each other, aided by technology, sparking bubbles of innovation.

- Projects quickly flourish, evolve and resolve and specialists move rapidly from one to the next.

Organisational challenges

- Speed to market is everything in the Red World – any decision-making process or hierarchy that delays innovation is a barrier to success.

- While ideas flourish, organisations compete to 'own' them.

- Innovation creates a high-risk environment; regulation struggles to catch up – but when it does, it impacts unevenly and suddenly.

- Workforces are lean but there's still intense competition for critical skills.

"There's a lack of loyalty from the company towards the employees. Workers with skills in demand will prosper, those with outdated skills will be abandoned."

Part-time Government employee (66), USA
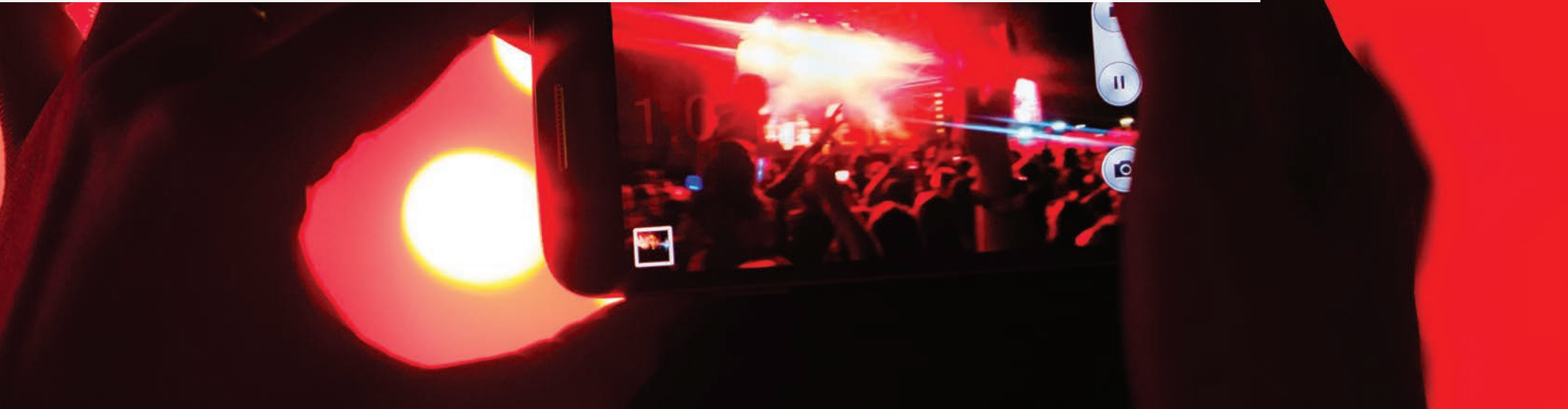
Red World

In 2030, the search for talent is as difficult as ever. Artificial intelligence allows businesses to identify the talent they need, when they need it.

Here's an extract from an AI-powered talent tool which might be readily available in 2030.

SkillScanEx™
Anticipating your talent needs

I want to _

SkillScanEx™ Aggregator
Find the talent you need, no matter which platform it's on. Our natural language interface allows you to tell us what you need – and what you don't.

SkillScanEx™ Anticipator
Connect at a deeper level and Anticipator will alert you when you need new skills or capacity from the conversations happening within your business. Anticipator helps you make the right choice between human and machine talent.

SkillScanEx™ Business planner
Business Planner links customer enquiries, open innovation projects and current human and automated productivity to forecast both business performance and critical skills gaps.

View all   Load more

Corporate is king: The Blue World

Global corporates take centre stage. Consumer choice dominates. A corporate career separates the haves from the have nots.

Blue World: *The road to 2030*

2020

The net worth of the top 1% of Chinese households overtakes that of the top 1% of US households for the first time.

2021

Merger of the world's biggest social media site and Africa's largest telecoms company becomes the biggest corporate deal ever recorded.

2022

The world's biggest employer agrees unique 'borderless' working for its employees across its six biggest markets in a ground-breaking tax deal with their governments.

2025

UN agrees its Ethical Charter on Human Enhancement.

2030

India's largest tech company announces a 24% increase in annual revenue, largely attributed to its introduction of cognitive-enhancing drugs for its workforce.

Capitalism reigns supreme

In the Blue World, companies see their size and influence as the best way to protect their prized profit margins against intense competition from their peers and aggressive new market entrants. Corporations grow to such a scale, and exert such influence, that some become more powerful than nation states.

Success depends on a productive workforce as large companies compete for the best talent. They push past the limits of human ability by investing augmentation technology, medication and implants to give their people the edge.

Extreme talent

Corporates may dominate the Blue World, but workforces are lean.

Exceptional talent is in high demand – employers secure a core group of pivotal high-performers by offering excellent rewards but otherwise buy in flexible talent and skills as and when they're needed.

Human effort, automation, analytics and innovation combine to push performance in the workplace to its limits; human effort is maximised through sophisticated use of physical and medical enhancement techniques and equipment, and workers' performance and wellbeing are measured, monitored and analysed at every step. A new breed of elite super-workers emerges.

What it means for workers

For workers in the Blue World, the pressure to perform is relentless. Those with a permanent role enjoy excellent rewards, as do in-demand contract workers with specialist skills – but both know that their future employability depends on keeping their leading-edge skills relevant.

A corporate employer separates the haves from the have nots; companies provide many of the services, from children's education, eldercare and healthcare, previously provided by the state.

The price workers must pay is their data. Companies monitor and measure obsessively, from the location of their workforce to their performance, health and wellbeing – both in and outside the workplace. Organisations use the data to predict performance and importantly, to anticipate people risk.

70%

would consider using treatments to enhance their brain and body if this improved employment prospects in the future.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US – base all those who are not retired 8,459

Who leads on people strategy?

- The Chief People Officer (CPO) is a powerful and influential figure, sometimes known as the 'Head of People and Productivity', and who sits on the board.

- The science of human capital has developed to such a degree that the connection between people and performance is explicitly demonstrated by the CPO.

- The people risk agenda is one which is taken seriously by the board – as a result, the CPO and HR become more influential.

What does the workforce look like?

- Aside from a core group of high-performers, talent is bought in where and when it's needed. 'Retainer and call-up' contracts are frequently used for rare skills.

- Top talent is fiercely fought over – the best engage an agent to negotiate and manage their career.

- Employers begin their search for exceptional talent early, forming links with schools and engaging promising youngsters.

- Employees of all levels take an active role in their own career development, honing their skills whenever they can and however they can – including human enhancements.

- Society divides into those with a corporate career – and those who don't have access to the same level of financial rewards, healthcare and benefits.

Organisational challenges

- The challenges of size and scale mean that organisations are at greater risk from external threats such as technology terrorism or meltdown and they find it difficult to effect change quickly.

- The value of human capital at the top level is high and the upward pressure on reward, particularly for senior executives, is intense.

- Organisations must develop models and systems which enable individuals and their agents to negotiate the value of their human capital based on employees' personal investment strategies.

"The gap between the rich and the poor. Either people will have a high paying job or no job at all."

Unemployed female (50), Germany
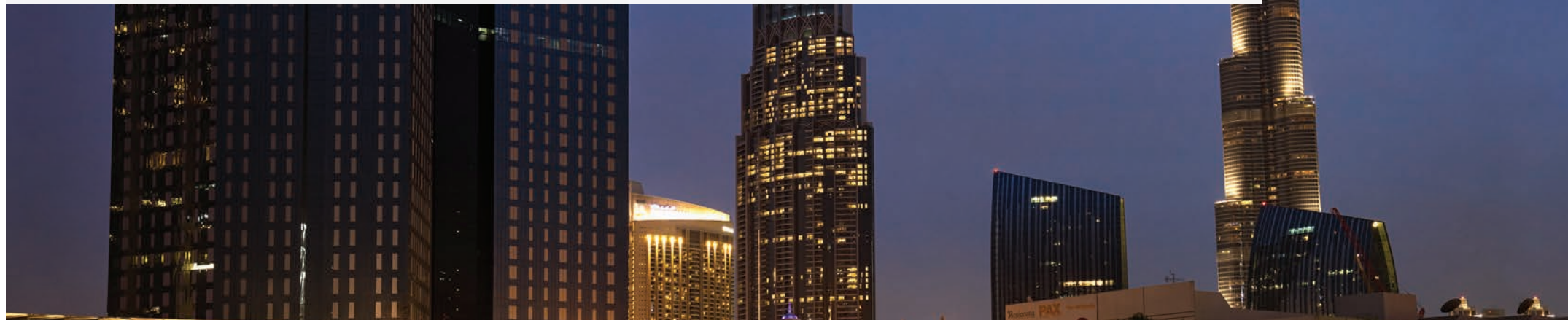
Blue World

In 2030, organisations begin to realise the benefits of human enhancement in the workplace.

An online news report from 2030 details the first large-scale use of cognitive-enhancing drugs.

World News

3 May 2030 09.30 ET

Drumhum Inc leads the pack in the use of cognitive-enhancing drugs in the workplace as companies begin to realise their benefits.

Drumhum Inc, the first large employer to offer cognitive-enhancing medication to its employees, says it has seen a 4% increase in productivity during the first three months of the financial year.

Drumhum offered the methylpehnidate-based drug Cognitalin, the first cognitive enhancer to be mass produced specifically for use in the workplace, to its employees on a voluntary basis at the beginning of the year. "The programme," said Nancy Cole, the company's Head of People Performance, "was closely monitored; it was also heavily oversubscribed, with more than 73% of Drumhum's 3,000 workers based in the US volunteering to take part."

Cognitalin, a modified methylphenidate substitute developed by PharmaXcog, increases concentration and enhances memory function by increasing the synaptic concentration of the neurotransmitters dopamine and noradrenaline by blocking their reuptake and stimulating the prefrontal cortical network. It was licenced for non-medical use in 2027 following the publication of the Ethical Charter on Workplace Enhancement.

Drumhum measured the performance of the Cognitalin group against a control group of employees of similar experience and demographics, who continued with Drumhum's standard programme of gaming-based cognitive training. "The group taking Cognitalin," said Cole, "proved significantly more productive, completing a complex coding exercise around 10% more quickly than the control group – with 4% fewer errors."

Read more

Companies care: The Green World

The need for a powerful social conscience is paramount. Workers and consumers show loyalty towards organisations that do right by their employees and the wider world.

Green World: *The road to 2030*

2020

'Stop the Bots' marches against job losses attract tens of millions of demonstrators in Detroit, Toronto, Mumbai and London.

2021

A year-long drought in eastern Pakistan and northern India causes the deaths of two million people. More than 30 million are displaced.

2022

The #waterwaster social campaign targets organisations that have failed to reduce their water consumption since international guidelines were agreed in 2020. The share price and revenue of a dozen multinationals plummet.

2025

International accounting standards require a 'Natural Capital and Social Capital impact' balance sheet from all listed companies.

2030

The European Union introduces legislation that bans all companies trading within the EU from using petrol and diesel vehicles.

Companies have to care

In the Green World, corporate responsibility isn't just a nice-to-have – it's a business imperative. Companies are open, collaborative organisations that see themselves as playing an essential role in developing their employees and supporting local communities.

Reacting to public opinion, increasingly scarce natural resources and stringent international regulations, companies push a strong ethical and green agenda. This is characterised by a strong social conscience, a sense of environmental responsibility, a focus on diversity, human rights and fairness of all kinds and a recognition that business has an impact that goes well beyond the financial.

Trust is the basic currency underpinning business and employment. Companies have to place their societal purpose at the heart of their commercial strategy.

The automation conundrum

Automation and technology are an essential element of the Green World as they help to protect scarce resources and minimise environmental damage.

Technology is used extensively to replace the need for travel, driving rapid innovation in communications technology.

But the question of where people fit into the automated Green World looms large. Technology is a double-edged sword for Green World employers – it allows them to meet their ethical and environmental agenda, but at what cost to humans?

What it means for workers

Employees enjoy family-friendly, flexible hours and are encouraged to take part in socially-useful projects. They trust their employer to treat them fairly in terms of pay, development and conditions and in return are expected to reflect the culture of the company in their approach and behaviour.

The high ethical standards to which companies are held has cascaded down to employees; conduct and ethics are taken very seriously at work and performance is assessed against a wide range of measures, including how efficiently workers manage their travel and resources.

23%
say 'doing a job that makes a difference' is most important to their career.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US

Who leads on people strategy?

- The CEO drives the people strategy for the organisation, believing that the people in the organisation, their behaviours and role in society have a direct link to the organisation's success or failure.

- The HR function, renamed 'People and Society' embraces a broad mix of HR, marketing, corporate social responsibility and data analytics.

- A priority for HR is developing and maintaining a series of virtual social networks across the organisation and client base to encourage communication and minimise the need for travel.

- Many people decisions are tightly controlled by regulation, from diversity quotas to, mandatory wellbeing support (eg sleep clinics and 'digital dieting'), to the number of redundancies companies can make during a downturn.

What does the workforce look like?

- Workers are attracted to Green World companies by the opportunity to work for an organisation they admire, whose values match their own.

- Even so, competition remains intense for the best talent; financial reward is still important.

- The incentives package is an essential tool in attracting and retaining workers and has become increasingly inventive. Three weeks' paid leave a year to work on charity and social projects is standard practice.

- Workers are expected to reflect the values of their employer – both at work and at home through 'organisational pledges'.

- Travel is tightly controlled and monitored and there are incentives for inventive and efficient use of resources.

- The idea of a 'job for life' returns to the workplace lexicon.

Organisational challenges

- Communicating corporate purpose and values effectively, to the right people, is a fundamental requirement.

- Building and maintaining trust with employees and wider society, especially when it comes to the use of automation, is essential.

- The brand must be protected at all times. The possibility of non-socially responsible behaviour within the organisation or anywhere along the supply chain carries huge risks. Quality assurance and vigilance is paramount.

- Being compliant is not enough: organisations are under pressure to raise the bar and establish policies and practices which go beyond and even anticipate regulatory requirements.

- Organisations have to balance the trade-off between short-term financial and long-term societal good.

"Climate change [will be the biggest impact on the way we work], we are going to have to change our priorities."

Female manager in the pharmaceutical industry (30), USA

Future view

Green World

In 2030, real-time reporting of sustainability data is a legal requirement for all listed companies – most unlisted entities also voluntarily produce detailed quarterly data.

Here's an extract from an imagined organisation's 2030 sustainability report which allows online comparison with peer group organisations.

Green Bar Brewing Inc

Sustainability hub
Energy and Water Consumption – Summary
Updated 11:00 GMT 12/11/2030

Energy use	2029/30 (to date)	2028/29 FY
Total energy consumption 2025/26 FY (Gw)	1,002	1,130
Total consumption per FTE (Kw)	0.09	0.13
CO_2 emissions (kilotonnes)	17.3	18.1
Travel-related emissions	6.4	8.3

Peer group comparison 🏆

Top 10%

Our water report	2029/30 (to date)	2028/29 FY
Total consumption (million gallons)	823	889
Water used per litre of product	2.7:1	2.9:1

Water consumption per annum (baseline 2022)

2026	2027	2028	2029	2030
97%	95%	93%	92%	91%
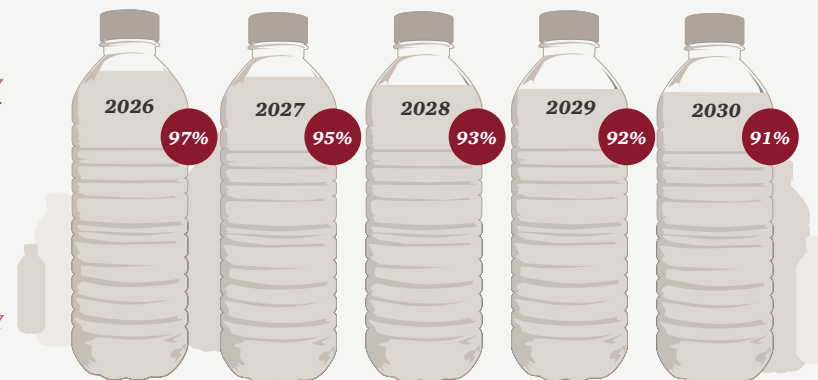
Water consumption per country
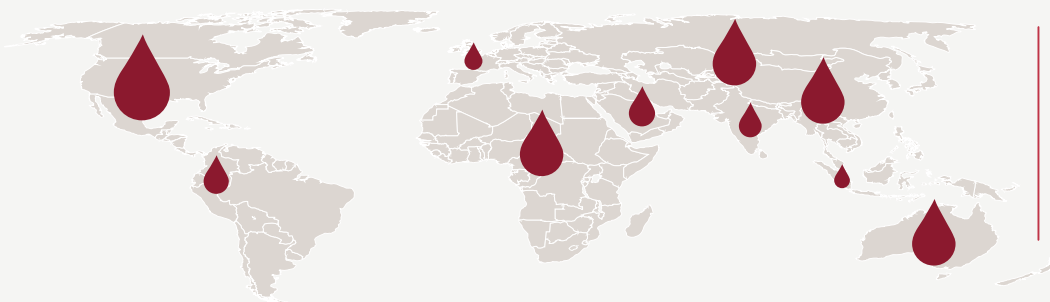
Key suppliers
In accordance with the Sustainability Act 2022, we collect and publish key sustainability data for any of our suppliers that contribute to more than 7% of our total costs.
Click through for information.

Company 1
Company 2
Company 3

Social impact	2029/30 (to date)	2028/29 FY
Number of workers*	7,610	7,789
Community hours/per worker	9.6	8.3

*All individuals undertaking paid work for this organisation - both employed and self employed but excluding suppliers with more than 1 employee.

Humans come first: The Yellow World ━━━━━

Fairness and social good are dominant. Businesses with a heart and artisans thrive in a bustling and creative market with a strong emphasis on ethics and fairness.

Yellow World: *The road to 2030*

2020
European Commission agrees the Fair Pay Directive.

2021
The world's largest taxi company bows to public pressure and introduces a 'human driver please' option to its app.

2022
The Shanghai Stock Exchange announces that all listed companies must be free from the use of conflict minerals by the end of 2025.

2025
Brazil becomes the last of the G22 nations to renationalise its water and energy supply.

2030
The 'Made by Me' quality mark – indicating that no machines have been involved in production – achieves worldwide recognition.

We're all in this together

In the Yellow World, workers and companies seek out greater meaning and relevance in what they do.

A strong desire for 'fairness' in the distribution of wealth, resources and privilege drives public policy, leading to increased government intervention and consumers and workers voting with their feet.

Workers find flexibility, autonomy and fulfilment, working for organisations with a strong social and ethical record. This is the collective response to business fragmentation; the desire to do good, for the common good. A wider range of work is regulated by a concept of 'good jobs' and decent work; moving away from traditional employer/employee relationships.

The two sides of technology

Technology has helped to create the vibrant Yellow World by lowering barriers to entry by providing easy access to crowdfunded capital and a worldwide market. This allows entrepreneurial companies to compete in areas previously the domain of large organisations.

But there is a central conflict around technology and automation; in the Yellow World, people are less likely to take the downsides of automation without a fight. As more people are impacted by technical advances and see their skills become obsolete, disaffection and the push-back against policies that seem to favour the 'elite' grow.

However, 'invisible technology' such as AI-driven 'back office' functional support and the automation of tasks that are damaging or impossible for humans, still pervades.

What it means for workers

Workers feel the strongest loyalty not to their employer, but to people with the same skills or cause.

The Yellow World is the perfect breeding ground for the emergence of new worker Guilds, similar to the craft associations and trade fraternities of the Middle Ages. These Guilds develop in order to protect, support and connect independent workers and often provide training and other benefits that have traditionally been supplied by employers.

25%
say their ideal employer is an organisation with values matching their own.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US

Who leads on people strategy?

- Business leaders are responsible for people direction and management.

- HR rarely exists as a separate function as organisations rely on outsourced services, specialist suppliers and automation for people processes.

- Guilds support workers to build skills and experience by providing training and career development support alongside other help and advice.

- Digital platforms create mobility and help match worker with employer and skills and attributes with demand.

- Performance is about delivering an organisational goal but also, importantly, about employees' behaviours and societal impact.

What does the workforce look like?

- Like-minded workers gravitate towards each other, aided by technology platforms.

- Individuals come together to collaborate on projects or to deliver on an idea – for as long as it takes.

- Guilds help workers create scale when needed, remain current and build trust in their services.

- Guilds provide members with a strong sense of identity – individuals see themselves as members of their profession, identifying with each other because of their particular skills set, interests and goals.

- Non-financial rewards are assessed fairly in a trade-off for less pay.

- Work is often a fluid concept and a regimented 9 to 5, Monday to Friday working week is rare; the borders between home and work are blurred.

Organisational challenges

- Brand and a good ethical record is essential in the Yellow World. The risk of brand damage from rogue workers must be actively managed.

- Organisations are judged on trust and fairness; organisational purpose must be clearly articulated and lived.

- Ethical and transparent supply chain management is critical and penalties apply all along the chain for non-compliance.

- In the Yellow World, relationships with governments and NGOs are vital and need to be closely managed.

"The ability to work from anywhere, combined with the advances in telecommunications makes us geographically neutral. However we must ensure that the personal touch is retained."

Manager (52), UK

Guilds have extended their responsibilities for their members, including wellbeing, pensions, training and by 2030, university education.

Here's what an education news forum could report in 2030.

Guild University opens for business in Helsinki

23 August 2030

The GDA (Guild for Data Analysts) University in Finland, the first campus university opened by a Guild in Europe, will welcome its first residential students next month. The GDA announced in 2026 that it was to invest €35m in developing a university dedicated to data analytics research and teaching in response to growing demand from its members.

The new GDA University is set on the former site of Urban-Metro University, which closed its doors in 2027. The campus was purchased by the GDA in 2028 and has undergone an extensive refurbishment and digital upgrade. "We can offer our students the very latest learning technology and infrastructure," said GDA University Vice Chancellor Eino Virtanen. "As you would expect from a Guild that represents the finest talents in digital analytics, our campus is state-of-the-art."

The GDA is the largest and fastest growing of the Guilds with more than 18m members worldwide. It has run an extensive programme of training courses since it was set up in 2021; its library of MOOCs (massively open online courses) is heavily used by members and non-members alike and a selection of short residential courses for Guild members was launched in 2025.

Read more

The university will initially offer modular courses and accreditation which build into the three levels of Guild Certification, today's gold standard for data analysis professionals. While applications are accepted from all, those students that are already members of the GDA will enjoy subsidised fees.

"As a Guild we are constantly striving to help our members develop the skills that have made them so valuable in the workplace," said Julia Hawley, chief executive of the GDA. "Our new university will track the skills demands within the industry and move quickly to make sure that our students leave their education ready to add real value to businesses worldwide."

The people management challenges in 2030

Red World

Blue World
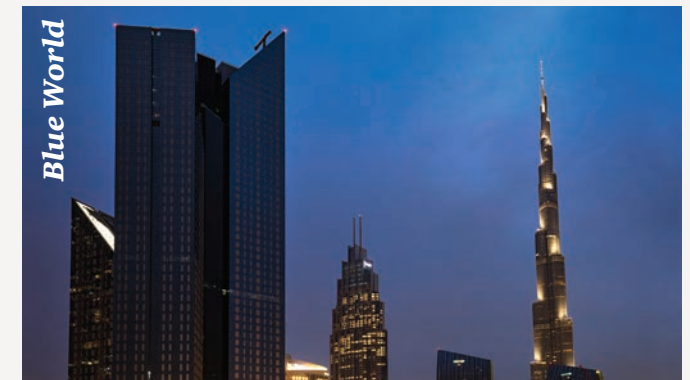
	Red World	Blue World
Finding, sourcing and attracting talent	People with ideas and organisations with capital seek each other out in a vibrant online marketplace. Talent is attracted by a combination of financial reward and the opportunity to be involved in winning projects.	Organisations compete to find and secure the best talent available and use extensive search and evaluation methods to lock in the stars of tomorrow.
Reward and performance	Those with in-demand skills expect the highest financial rewards.	Performance is obsessively monitored and measured – often in real-time. Excellent incentives are on offer for the best talent, as long as they perform.
Learning and development	It's every man and woman for themselves in the Red World – individuals hold responsibility for improving their own skills using a new generation of open-source learning tools.	Development is concentrated on a small core group of high-potentials.
The role of HR	HR as we know it vanishes, replaced by automation, outsourcing and self-organising teams.	HR uses advanced analytics to predict future talent demands and to measure and anticipate performance and retention issues.
Role of technology in managing people	Technology powers the Red World but performance is judged primarily on short-term results.	Sensors and data analytics measure and optimise performance continuously.

Green World

Yellow World

Green World	Yellow World
Green World companies seek likeminded individuals to extend their corporate family, taking great care to select only talent with the right behaviours and attitudes.	Companies use technology to explain their purpose and cause openly. If their values are right, and the idea appealing, talented individuals and relevant Guilds flock to help.
Organisations focus on total reward, which recognises corporate citizenship and good behaviours alongside performance.	Fair pay drives the Yellow World; organisations and workers respect each other's needs and capabilities. When disputes occur, the Guild will stand up for its workers.
Personal and professional development fuse in areas such as volunteering. Companies train people to deal with ethical dilemmas and weigh up difficult economic v social trade-offs.	Individuals take responsibility for lifelong learning, turning to Guilds for support.
HR acts as guardian of the brand. There is a strong focus on creating the right culture and behaviours and on guarding against sustainability and reputational risk across the supply chain.	The traditional core functions of HR are held by business leaders, the collective or taken on by Guilds.
Technology helps people to build work into their lives and minimise their environmental impact.	Technology creates and supports the open, honest, collaborative community of the Yellow World.

What does this mean for jobs?

Our Four Worlds of Work are each markedly different, but through each runs the vein of automation and the implications of robotics and AI. Will robots eventually replace us all at work? Or will we create a new world where people and machines work alongside each other? It's the most fundamental – and difficult – question we must ask of the future of work.

As more individual tasks become automatable through AI and sophisticated algorithms, jobs are being redefined and re-categorised. A third of people worldwide are now worried about losing their job to automation[4].

It's clear that automation will result in a massive reclassification and rebalancing of work. Some sectors and roles, even entire sections of the workforce will lose out but others will be created.

Automation will not only alter the types of jobs available but their number and perceived value. By replacing workers doing routine, methodical tasks, machines can amplify the comparative advantage of those workers with problem-solving, leadership, EQ (Emotional Intelligence), empathy and creativity skills.

Those workers performing tasks which automation can't yet crack, become more pivotal – and this means creativity, innovation, imagination, and design skills will be prioritised by employers.

This view is supported by business leaders worldwide who responded to our most recent CEO survey[5]. While CEOs are keen to maximise the benefits of automation – 52% told us that they're already exploring the benefits of humans and machines working together and 39% are considering the impact of AI on their future skills needs – the majority (52%) were also planning to increase headcount in the coming 12 months. Finding the skills they need has become the biggest threat to their business, they say, but the skills they're looking for are particularly telling: problem-solving, adaptability, collaboration, leadership, creativity and innovation top the list.

Figure 2: Jobs at risk of automation by country[6]

US	Germany	UK	Japan
38%	35%	30%	21%

4 PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US
5 PwC 20th Annual Global CEO Survey http://www.pwc.com/talentchallenge
6 http://www.pwc.co.uk/economic-services/ukeo/pwc-uk-economic-outlook-full-report-march-2017-v2.pdf

Adaptability – the key to the future

One clear lesson arises from our analysis: adaptability – in organisations, individuals and society – is essential for navigating the changes ahead.

It's impossible to predict exactly the skills that will be needed even five years from now, so workers and organisations need to be ready to adapt – in each of the worlds we envisage.

Inevitably, much of the responsibility will be on the individual. They will need not only to adapt to organisational change, but be willing to acquire new skills and experiences throughout their lifetime, to try new tasks and even to rethink and retrain mid-career.

Governments and organisations can and should do much to help: easing the routes to training and retraining, and encouraging and incentivising adaptability and the critical and increasingly valued skills of leadership, creativity and innovation.

Pivotal talent: The ultimate prize

Automation of routine tasks encourages the increased specialism we see in the four worlds. This suggests that those workers with the critical skills that organisations need will become the ultimate prize – whether they are full-time employees or contract workers. These are the 'pivotal' people – those that contribute outsized and absolutely crucial value to their organisation.

Finding and keeping these pivotal people will be a huge challenge in every world. They will be hard to find and difficult, in a loyalty-light world, to keep. And in the hard-driven Red and Blue worlds, the risk of losing pivotal people to burnout or early retirement (comfortably funded by the high rewards they'll command) will be a constant worry.

That's why organisations will need to pay careful attention to the employee value proposition – the reasons why these extraordinary people were attracted to working with them in the first place.

74%

are ready to learn new skills or completely retrain in order to remain employable in the future.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US – base all those who are not retired 8,459

Working together as a society – our recommendations

Managing the impact of the trends shaping our Four Worlds of Work won't be easy. It requires collaboration and engagement from governments, organisations and society at large. Together we should:

Be deliberate in the way we allow technology to develop

Governments, organisations and society should work together to develop a responsible approach and policies that govern the impact of technology and automation on jobs – including a clear discussion on the ethics of AI. Governments should engage with organisations developing the use of robotics and AI at all stages of policy making, to create a pool of thought leaders with a deep understanding of the interplay between technology and its effect on society[7].

Look for innovative ways to address unemployment caused by technology

All governments will need to address the issue of unemployment driven by technology. This could include testing social safety nets such as universal basic income and identifying new sources of income for citizens. Underdeveloped countries that will increasingly struggle to catch up with the rest of the world will need to go further and consider radical new approaches. In the long run, they will need to create their own internal markets as their primary sources of revenue.

Help people help themselves

As the 'typical' linear career path ceases to exist,
perceptions of the value of the new norm of a 'portfolio
career' must change. Time does much to shift thinking but
incentives are needed too. For many workers job mobility,
constant retraining and rotation will become the crucial
way of improving their adaptability, employability and
usefulness to society. But many people also feel tied to
their current career and job because of the pressures of
debt and the 'stickiness' of employer benefits – whether,
that's student debt, mortgages or loans, or non-transferable
benefits like employer-sponsored healthcare or pensions.
This too has implications for wider society. Incentives
aimed at encouraging mobility and development of skills
will be important.

56%
*think governments
should take any action
needed to protect jobs
from automation.*

PwC survey of 10,029 members
of the general population based in
China, Germany, India, the UK and
the US – base all those who are not
retired 8,459

The individual response

As individuals – be it workers, students, parents or consumers – it's important to have a clear view of what the future, driven by the megatrends and our own actions, will look like. What role will we play? What actions should we take? What should we tell our children and grandchildren, colleagues, neighbours and friends about the future of work?

We believe that individuals should:

Understand the big picture

Pay attention: Understand how technology is developing and what it and the other megatrends could mean for the world of work – and you specifically.

Expect the unexpected: Use our four Worlds of Work to consider how different the world could look and plan for multiple scenarios and outcomes.

Plan for an automated world

Find the gaps: In an automated world we will still need human workers. Whether this is working to develop technology, alongside it – or in narrow, very specialist or very human types of employment – the places automation simply can't compete in yet. Work out where you want to be.

Get your skills in order: The skills needed for the future are not just about science and technology. Human skills like creativity, leadership and empathy will be in demand. Identify the skills you need and start to concentrate on how to build them – and how to use them alongside technology.

Take action

Adapt to survive: The human race is infinitely adaptable but also risk averse. Work out what holds you back – whether structural and financial (loans, mortgages, responsibilities) or emotional. Work out what matters to you and your family and plan for change.

Jump on a passing ship: There is no one future-proof career, only better options for you. Determine how to get to the 'next better thing'.

"As individuals – actual human beings – what do we need to do to thrive and prosper in whatever the new world brings? The secret for a bright future seems to me to lie in flexibility and in the ability to reinvent yourself. If you believe that the future lies in STEM skills and that interests you, train for that. But be prepared to rethink if the world doesn't need so many programmers. If you are a great accountant who has prospered by building strong client relationships, think how you can apply that capability, without necessarily having to be an accountant. Think about yourself as a bundle of skills and capabilities, not a defined role or profession."

Carol Stubbings
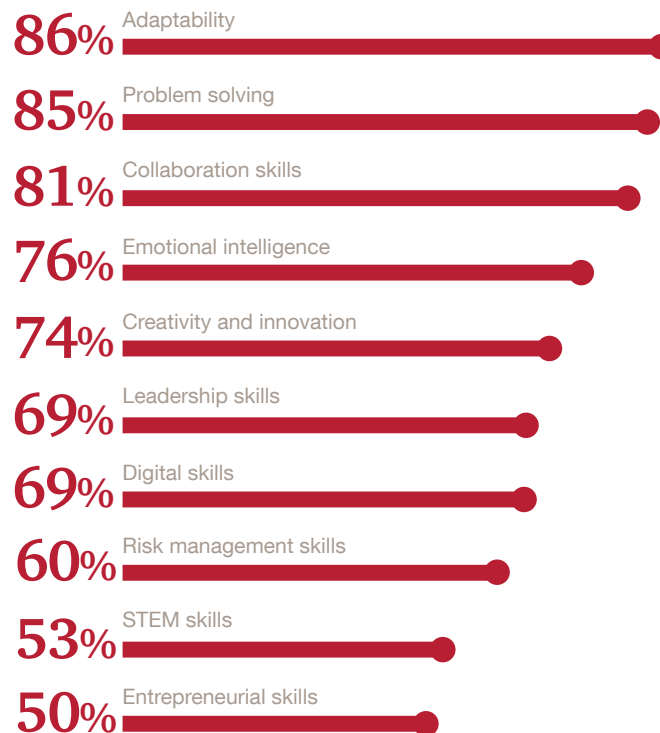Global Leader, People and Organisation, PwC

65%

think technology will improve their job prospects in the future.

74%

believe it's their own responsibility to update their skills rather than relying on any employer.

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US – base all those who are not retired 8,459

Figure 3: I have the following skills and attributes (percentage who agree or strongly agree)

86% Adaptability

85% Problem solving

81% Collaboration skills

76% Emotional intelligence

74% Creativity and innovation

69% Leadership skills

69% Digital skills

60% Risk management skills

53% STEM skills

50% Entrepreneurial skills

PwC survey of 10,029 members of the general population based in China, Germany, India, the UK and the US

"Technology and the ability to save so much time. I think that a lot of jobs that were needed in the past will no longer be needed. Different jobs will be created that demand different skill sets."

Unemployed skilled manual worker (46), USA

The 'no regrets' moves for organisations

Organisations are faced with an array of choices when looking at the future. This requires an understanding of the possibilities – both desired and undesired – to plan accordingly.

No matter what the future holds, we believe there are some 'no regrets' moves that apply universally:

Linear predictions don't cut it

- Plan for multiple and emerging visions of the future using a scenarios approach.

- Understand clearly how each creates different workforce challenges and implications.

Make decisions based on purpose and values

- Build a future-looking understanding of how humans and machines might collaborate to deliver your corporate purpose.

- Clarify your values and behaviours that underpin your policies, processes, decision-making and priorities.

- Identify and engage with internal and external stakeholders to manage their expectations and co-create the future of work.

- Create an open and transparent narrative on how you are influencing, planning and delivering on the future of work – for your organization, society and individuals.
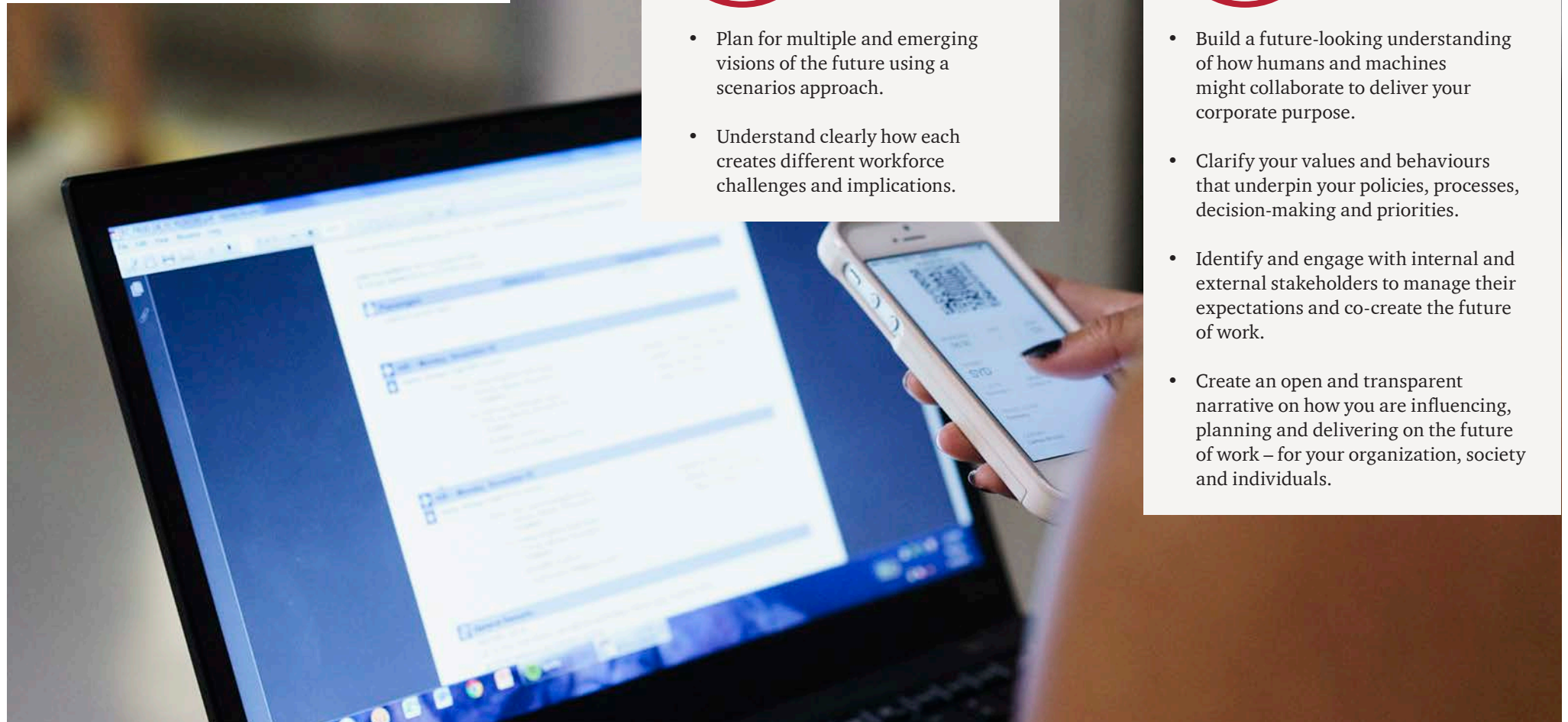
Embrace technology as a force for good

- Clarify how robotics and artificial intelligence can enable the redesign of work, enhance productivity and customer experience, and enable a focus on more value-added tasks.

- Use sophisticated workforce planning and predictive analytics to plan for talent pipelines in multiple future scenarios.

- Look for ways technology can enhance your people offering for potential and existing employees.

Focus on the humans and the humane

- Understand the skills you have in your workforce now (not just the roles your workers currently do) and the gaps to the skills you will need in the future. Think beyond simplistic concepts like 'we need more STEM skills'.

- Strengthen innovation, creativity, empathy and leadership capabilities in your business alongside critical technology skills.

- Make talent and capabilities management a matter of urgency – or risk losing the battle to harness technological breakthroughs and innovation in your sector.

- Build and nurture adaptability in your workforce by harnessing a flexible talent mix. new ways of working and learning, and radically different career paths.

- Redesign traditional 'one-size-fits-all' HR programmes and policies to deliver on new learning and development models, career paths, capability models and the redesign of jobs and compensation frameworks.

"The technological or robotized workforce [will be the biggest impact on the way we work] but the human work will always be a unique and determining factor in any organization."

Engineering & Construction sector worker (37), USA

Conclusion

We've outlined in this report four very different models with huge implications for the world of work. The forces shaping these Four Worlds – the impact of megatrends, and automation in particular – cannot be ignored by governments, organisations or individuals.

None of us can know with any certainty what the world will look like in 2030, but it's very likely that facets of the Four Worlds will feature in some way and at some time. Some sectors and individuals are already displaying elements of the Blue and Green Worlds; the Yellow and Red Worlds are more radical, but no less plausible.

Those organisations and individuals that understand potential futures, and what each might mean for them, and plan ahead, will be the best prepared to succeed.

Recruitment – where do we start?

- **Organization purpose** – alignment with values, ethos, core principles…

- **Strategic direction** – service orientation, technical competency, growth, consolidation….

- **Org architecture & roles** – lean, centralised or distributed, specialization, role clarity…..

- **Workforce planning** – focus on current & future needs……

Recruitment – getting the mechanics "right"

- **Tapping the talent pool**
  - who – skills & competencies, "soft" aspects, nature and depth of experience
  - where – local, regional, national, international…..
  - how – campus, agency led, networks, social media…..
- **Running the process**
  - Engagement – experiential or one sided……
  - Assessment – past or looking ahead……
  - Fitment – mechanistic or humanistic……
  - Evolutionary – based on feedback……

Recruitment – the journey begins.....

- **The offer (making it less onerous) –**
  - **Background checks** – is she who she says she is?
  - **Paperwork** – crossing the Ts and dotting the Is on the agreement, supporting documentation
- **On boarding –**
  - Have a formal process?
  - Coaching/mentoring – *inter alia* inculcate a performance culture
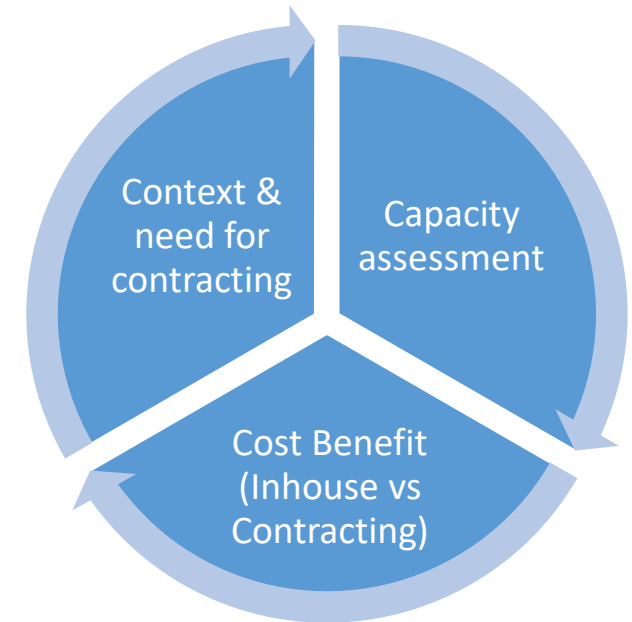- .....supporting the employee/staff through her journey........

Contracting – creating shared value

3 Cs for Contracting:
- Context & need for contracting
- Capacity assessment
- Cost benefit analysis

Key Considerations
- Define clear **objectives** for contracting
- **Structure of contract**- single department specific contracts or a function specific contract
- **Number of contractors** & market availability
- Outcome based **performance indicators**

Thank you!