

# UNITE FUTURES

## horizon scans



SOCIAL

01

What are the social trends that may shape the future for students in HE?

TECHNOLOGICAL

02

How will technical developments impact on the work of Unite Students?

ECONOMIC

03

What are the economic forces that will create opportunities and challenges?

ENVIRONMENTAL

04

Which environmental issues will have the biggest effect on Unite's operations?

POLITICAL

05

How will political and legal changes affect the operating environment?

HIGHER  
EDUCATION

06

What are the biggest disruptors for the HE sector in the UK?

START

SOCIAL

TECHNOLOGICAL

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POLITICAL/LLEGAL

HIGHER  
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SOCIAL

01

What are the social trends  
that may shape the future for  
students in HE

POPULATION  
MATTERS

The global population will  
continue to grow, will be  
more middle class and will  
tend to live in cities.

GROWING OLD  
GRACEFULLY

In the UK and across the  
world, populations are  
getting older - with  
profound consequences.

NEXT-GEN

Smart and tech-savvy, Gen  
Alpha have grown up with  
recession, a pandemic and  
a threatened world.

UNEQUAL WORLD

Inequality is rising sharply  
across the world - with  
major impacts for the poor  
as well as for society at  
large.

DIVIDED WE FALL

Addressing patterns of  
discrimination will have  
benefits to individuals and  
society.

THE ACTIVE  
CITIZEN

Young people are just as  
likely to be engaged with  
their community or with  
politics - but in different  
ways.

MENTAL HEALTH

More of us, including  
students, are experiencing  
mental health issues,  
especially during Covid.

COST OF CARE

Adult social care faces  
increased demand and  
rising costs. How will it be  
afforded in the future?

TRUTHS, HALF  
TRUTHS AND LIES

We live in a culture of fake  
news which threatens our  
institutions and our trust in  
government.

THE FUTURE OF  
THE CENTRE

The centre of cities will  
need to be reinvented to  
accommodate different  
patterns of living, working  
and playing.

GENERATION  
RENT

For many young people,  
home ownership is  
beyond their reach. So  
what is the future for the  
rented sector?

CO-LIVING

How will people choose to  
live together? Is co-living a  
flash in the pan or here to  
stay?

SOCIAL MOBILITY

Family situations still has a  
major influence on social  
mobility and will hold back  
many from achieving their  
potential.

START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

SOCIAL

01

What are the social trends  
that may shape the future for  
students in HE

2030

92% of the UK  
population will be  
living in cities by  
2030

2040

5 million more homes  
needed by 2040  
due to ageing,  
immigration and  
smaller households

2041

The old age  
dependency ratio in  
the UK will increase  
from 0.28 to 0.4 by  
2041

2030

Global population  
will reach 8.5 billion  
by 2030, of which  
5.3 billion will be  
middle-class

2030

70% of 25-34 year  
olds will be  
in rented  
accommodation  
in 2030

Employee mental  
wellbeing will be a  
common theme in  
corporate reporting  
by 2025

POPULATION MATTERS

How the population is changing across the world

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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On a global basis, the broad consensus of population forecasts is that the world population will reach 8.5bn in 2030 and 9.7bn in 2050. After the world population increased more than 400% over the 20th Century, population growth has slowed considerably.

Currently, over 60% of the world’s population live in Asia but more than half of the population growth between now and 2050 will be in Africa. In contrast, the population of Europe will decline over that period. The major factors in the projected changes are a decrease in the fertility rates - with a decrease from 2.5 to 2.2 per woman by 2050 - and longevity as, global, life expectancy is set to climb from 72.6 to 77.1.

One notable feature of the next ten years is the rapid expansion of the middle class. By 2030, it is estimated that there will be 5.3 billion middle class - 2 billion more than today.

While that may be good for the economy, [it is estimated that the will be significant increase in demand for food \(35%\), water \(40%\) and energy \(50%\)](#). Efforts to sustainably meet the needs and desires of a growing world population will have implications for all countries – as will failure to meet these needs.

[In the UK, the population is expected to increase by about 3 million over the next 10 years](#), passing 70 million by 2031 and 72.5 million by 2043. Almost three quarters of he increase will be caused by net in-migration. England’s population is rising faster than the other UK nations.

Across the world, and particularly in Asia and Africa, [a rapidly increasing number of people are living in cities](#). This is set to increase from about 56% today to over 68% by 2050. 84% of the UK population already lives in urban areas. However, in the UK at least, there appears to be evidence that [Covid-19 has sparked a renewed interest in rural living](#).

GROWING OLD GRACEFULLY

Global and UK population will be substantially older

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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By 2030, [the number of older persons - those aged 60 years or over - in the world is projected to grow by 56 per cent, from 901 million to more than 1.4 billion](#). Ageing is not happening uniformly across the globe and will consequently change the balance of power. Europe will be the oldest region by 2031. This will continue to raise concerns about the ability of existing fiscal systems to withstand the pressures of ageing. Ageing is not happening uniformly across the globe and will consequently change the balance of power. Europe will be the oldest region in 2031 with a median age of 44.7 years.

Office for National Statistics projections show that the balance of the UK population will be substantially different by 2040. There will be more people in all the older age groups - with the number of over 85s doubling to 3 million. At the same time, there will be fewer young children and more teenagers. The dependency ratio (pensionable age : working age) is likely to rise from just under 300:1,000 to over 350:1,000 by 2040 - with rising issues of affordability of care.

In fact, due to demographic structure a central challenge over the next two decades is that the UK, along with most other developed countries, will need to prepare for more deaths. [There will be a ‘tipping point’ emerging and the current number of deaths of 0.5mn per year will increase by 20% over the next 20 years.](#)

This increase in the number of older people will have a profound impact on a wide range of public services - as the number of older people with care needs is expected to rise by more than 60 per cent in the next 20 years. Many people are not saving enough and will need to work longer. Health and social care costs – already challenged - will rise.

Alongside overall ageing of the population of 18-21 year olds increases to 2030 and then reduces to 2040, with implications for the potential undergraduate student population.

FURTHER READING

◀ SOCIAL HOME PAGE



NEXT-GEN

What do Generation Alpha aspire to?

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[Generation Alpha](#), are the first group of millennials’ children, born from about 2011 until 2025. [A picture of Generation Alpha is starting to emerge](#). In various articles about Gen Alpha , analysts have stated that they will grow up to be the best-educated generation ever, the most technologically immersed, and the generation more likely than any in the past century to spend some or all of their childhood in living arrangements without both of their biological parents

While Gen Alpha may be the most educated generation, [they will have very different ideas about what "education" means](#). They are likely to prioritise skills over degrees, real-world simulations, and on-the-job training over classes and will expect highly personalised and engaging training. They have become used to smart tools, including AI, and machine learning. They tend to learn at a fast pace and to be able to apply that learning in new ways. They are highly collaborative, and want education to come to them, and not them to it. This means that [virtual learning](#) will continue to be in high demand.

Growing up during a pandemic, recession, mental health epidemic, remote work experiment, and technological revolution will both define the Alpha's as a generation and have a lasting influence on whom they become as they eventually enter the workforce.

For some, however, their ambitions are not defined by a technological future but by their social background. [An OECD survey of 15 year olds across the world](#) found that many “are ignoring or are unaware of new types of jobs that are emerging. The analysis suggests that, in many countries, young people’s career aspirations increasingly bear little relation to actual labour market demand”.

UNEQUAL WORLD

The one per cent

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Social mobility and equality are worsening across the world and are expected to continue declining over the medium-term. Differences in income inequality are being accentuated by wealth inequality. Capital and assets are currently highly unevenly owned in most countries The richest [1% globally are forecast to own 65% of all wealth by 2030](#). Since the crash of 2008, the wealth of the richest 1% has been growing by 6% a year - double that of the rest of the population.

[A Jan 2021 report from the High Pay Centre](#) claims that pay for top CEOs today is about 120 times that of the typical UK worker. Estimates suggest it was around 50 times at the turn of the millennium or 20 times in the early 1980s.

The result is a widening of social and health outcomes, with children from the poorest communities having significantly lower life expectancies than those from more affluent areas. The social and economic consequences include a growing sense of unfairness, precariousness, perceived loss of identity and dignity, weakening social fabric, eroding trust in institutions, disenchantment with political processes, and an erosion of the social contract. This is both a moral and an economic issue which risks increasing instability, corruption and poverty. It is possible that further polarisation of communities will deepen social tensions. [Some link](#) the increase in public protest around world with rising inequality and high costs of living.

As [Christine Lagarde said while IMF chief until recently](#), said: “Reducing excessive inequality is not just morally and politically correct, but it is good economics.”

FURTHER READING

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DIVIDED WE FALL

Racial and gender divides have profound consequences

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[As of 2020, there remains global gender gap of 31.4%.](#) While gender gap in education and life expectancy is much closer - at 3.9% and 4.3%, it remains a significant in political representation and economic opportunity. Projecting current trends, it would take 99 years to close the gap.

The UK cannot be complacent, coming in at 21st on the global index - down from 9th in 2006. This is mainly due to differences in earnings and holding senior positions within organisations, and also the relatively few female Ministers in government.

Despite being one of the more multi-cultural countries in the world, [the UK still exhibits stark inequalities for people from black and minority ethnic \(BAME\) backgrounds.](#)

Stop and search rates are 10 times higher for black people, than for white people, up from 6 times in 2010. Black Caribbean people are far less likely to own their own home and be in social, rented accommodation. Educational attainment is lower within the Black Caribbean community. Black people are twice as likely to be unemployed, will find it harder to get jobs and will be paid less if in work. And recent data shows that those BAME communities are up to twice as likely to die from Covid-19.

However, across most BAME group, educational participation is high and attainment at record levels. So why is that not translating into labour market success? The business case is that diverse organisations that attract and [develop individuals from the widest pool of talent consistently perform better.](#)

THE ACTIVE CITIZEN

Civic participation is strong but changing

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Millenials and Gen Z are just as likely to be active participants in society and politics. However, for the under 30s, the means of engagement is likely to be very different. Their engagement is primarily done online, through social media or civic tech platforms. These tools give young citizens a greater voice in their community and help them express their concerns and priorities and building a long-term bond with local or national government.

While young people’s commitment to voting is in decline in many democracies today, large numbers of young people are nevertheless strongly committed to [non-conventional and civic forms of participation.](#)

[Teenagers are not trailblazing on traditional channels of political involvement, but neither are they selfishly doing nothing.](#) Three in ten British teenagers think it likely they will contribute to a discussion or campaign on social media. Generation Z in the UK are half as likely as Baby Boomers to think immigration is a major concern. Gen Z also seem to be more likely to value ethical purchasing. A quarter of teenagers say they have avoided certain products because of the conditions under which they were produced or what they are made from

Voting is still important for many but they want to engage differently. The recent rise in political participation in citizens ages 16-24 in both the United States and the United Kingdom shows that young voters are eager to engage, and [should therefore be given appropriate means to do so.](#)

The COVID-19 pandemic has made social distancing the norm across the country and even more of civic life has shifted to virtual environments. [This shift toward online engagement may better reach young voters,](#) especially those who are new or first-time voters who campaigns might not otherwise contact.

FURTHER READING

MENTAL HEALTH

A hidden disease with a growing cost

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[One in four adults and one in 10 children experience mental illness](#), and many more of us know and care for people who do.

Untreated mental health problems account for 13% of the total global burden of disease. It is projected that, by 2030, mental health problems (particularly depression) will be the leading cause of mortality and morbidity globally. [The 2013 Chief Medical Officer’s report estimated that the wider costs of mental health problems to the UK economy are £70–100 billion per year](#) – 4.5% of gross domestic product (GDP).

In 2019, [Randstad reported that 37% of students felt their mental health had deteriorated since they started in higher education](#) - with 64% of those believing that their studies and university lifestyle were the cause. Isolation caused by Covid-19 lockdowns and a change to online teaching has caused [increasing issues for many, particularly females](#).

[Students responding to the Student Covid Insight Studies \(SCIS\)](#) in late 2020 reported lower levels of life satisfaction, life worthwhile and happiness, and higher levels of anxiety, compared with the general population through the OPN.

A survey by [WONKHE and Trendence \(PDF, 1.33MB\)](#) found that in October 2020, compared with May 2019, the proportion of students who felt lonely daily or weekly is much larger (50% compared with 39%),

COST OF CARE

Caring for our most vulnerable keeps getting more expensive

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Local authority spending on adult social care in England fell 8% in real-terms between 2009–10 and 2016–17, but was protected relative to spending on other local authority services.

[The population has been growing, so spending on adult social services per adult fell by 13.5% in England](#). This doesn’t take into account that the population is ageing, which will have put additional pressure on adult social care services.

Looking forward, funding pressures are only going to grow. The population is getting bigger and older, and expectations are rising along with the costs of meeting them. [Social care is facing high growth in demand pressures](#), which are projected to rise by around £18 billion by 2033–34, at an annual rate of 3.9%. This is a combination of growing and ageing populations, rising numbers of people living longer with long- term conditions, and rising costs of providing care services.

[Central estimates suggest that by 2033–34 there will be 4.4 million more people in the UK aged 65 and over](#). The number aged over 85 is likely to rise by 1.3 million – that’s almost as much as the increase in the entire under-65 population.

How social care cost will be paid for in future, especially given the levels of public debt caused by the Covid-19 response, is an open question.

FURTHER READING

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TRUTHS, HALF TRUTHS AND LIES

Fake news undermines public and private institutions

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Across democracies, ‘fake news’ has flourished in current political climates. It has served to diminish the credibility of mainstream news networks, dividing the public opinion even further, both ideologically and on the mere acceptance of the facts.

The latest annual fraud and risk survey published by Kroll, the business intelligence and investigations firm, found that [84 per cent of companies feel threatened by the risk of false rumours being fuelled by social media](#) while “adversarial” social media featured in 27 per cent of corporate incidents in the past year. Tom Everett-Heath, Kroll’s global head of business intelligence and investigations, said companies were facing evolving threats. “Businesses are now operating in more complex and volatile markets than ever, relying on a broader network of third parties and becoming increasingly digitised. In many cases, they’re also putting their reputations in the hands of social media influencers,” he said

The culture of fake news is growing and, if left unchecked, posing serious threats to the future of our society. The problem is no longer the existence of fake news, but the rate at which it’s produced and shared as technology advances.

Increasing processing power and novel algorithms start to enable people to not only alter photos, but also voice recordings and video material. While not yet perfect, with enough training data these technologies are able to rearrange and even create new audio and video material that is hard to distinguish from the original. Looking ahead, [it is not hard to imagine that these methods become better and better, and fakes will ultimately be indistinguishable from real footage](#).

The Brookings Institution, in the USA, [grimly summed up](#) the range of political and social dangers that deepfakes pose: “distorting democratic discourse; manipulating elections; eroding trust in institutions; weakening journalism; exacerbating social divisions; undermining public safety; and inflicting hard-to-repair damage on the reputation of prominent individuals, including elected officials and candidates for office.”

THE FUTURE OF THE CENTRE

How will our city centres evolve?

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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As [thousands of businesses consider downsizing their space](#), conversion of office space into residential hubs will follow, with these spaces supporting wider community activities. Paris has already committed to turning one third of its underutilised office space into residential housing. And it’s not just offices; even before the pandemic, UK property developers were looking to convert retail outlets into housing. John Lewis and IKEA are both seeking to retrofit retail space into a mix of private, affordable and social housing. [A 2020 Social Market Foundation report](#) concludes that replacing commercial space with residential property could create 800,000 additional homes.

Conversion of offices to housing is accelerating as a result of changes to Permitted Development Rights (PDR) which give property owners the right to develop their premises from offices to housing without applying for planning permission. Across England, 65,000 such conversions have been carried out under the scheme in the last five years. The Local Government Association is concerned that [these developments are resulting in loss of thousands of desperately-needed affordable homes and creating unsuitable housing](#), far from amenities and with social problems.

A permanent shift towards working from home and increased online shopping could cost more than 400,000 retail jobs on England’s high streets, according to a report. The towns and cities worst affected by the reduction in commuter footfall could see nearly a third of office work performed at home, suggests KPMG’s [The future of towns and cities post-Covid-19 report](#). This, it argues, will mean many town and city planners and businesses will need to rethink their purpose and transform office spaces into hubs for collaboration, creativity and culture. Yael Selfin, chief economist at KPMG UK, said: “As people travel less for work or to shop, town and city centres will need alternative offerings to fill vacant space and to attract people to the area as we hopefully leave the pandemic behind sometime this year. “High streets will need to be reimagined as cultural and recreational hubs that will act as magnets for businesses and jobs able to transform less prosperous areas.”

FURTHER READING



GENERATION RENT

Most millennial will be living in rented accommodation

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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In the mid-1990s around one in 20 families with children lived in the private rented sector. Now more than one in five do. More than half of all private renters are now over 35. A form of tenure once confined to urban centres and university cities has spread to the suburbs and small towns. [Security of tenure is a big issue](#). The norm in England is a 12-month lease with no obligation to renew, whereas continental European countries offer much more security. Germany, for instance, gives tenants who behave themselves an indefinite right to remain in their homes.

Developers regard millenials – who want to live in dense urban areas, to prioritise convenience above all and ideally to travel on foot rather than by car – [as the core target market for mixed-use developments](#). Millenials also want community and mixed-use developments incorporate amenities that encourage socialising, such as co-working spaces and gyms. Mixed-use developments are a response to a change in consumer behaviour as, with the rise of convenience culture, physical retailers are suffering and struggling to attract younger shoppers through their doors.

Homeowners are benefiting from the coronavirus crisis, with cheap borrowing and government tax cuts driving real estate prices to an all-time high last year - but [ownership is further out of reach for the young, particularly in London](#) where the value of property has almost doubled in the last decade. There are implications for the productivity of the economy. High housing costs can make it hard for workers to relocate, depriving companies of talent and robbing young people of opportunities for better jobs and pay. Gary Stevenson, an inequality economist and former Citibank trader, warns that London house prices could double again. “It makes social mobility completely impossible and housing completely inaccessible for the bottom 50 or 60 percent of society.

CO-LIVING

Is co-living an answer to isolation?

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Tomer Bercoviz, chief executive of fast-growing co-living brand Vonder, believes Covid will enhance demand for co-living from people who have spent months in isolation, living alone or within their limited support bubble. That’s why Vonder is focussing more on community than a communal living experience. Their goal is to improve how people live, work and socialise.

[New development Vonder Skies](#) contains over 100,000 sq ft of residential space over five floors and includes state-of-the-art amenities and unique courtyards. 271 apartments provide options from studios to one-bedroom and two-bedroom flats. Average apartment size is 37 square metres. Vonder are seeing high demand, especially from young professionals. Leasing options - minimum of three months – are flexible.

Tenants belong to a true, active and supportive community but are still able to enjoy their alone-time in their spacious private spaces. Vonder’s philosophy goes beyond housing to a way of life. Curated events and content provide people with the opportunity to connect, experience and embark on new urban adventures.

Some have advocated that [building community networks within student accommodation](#) can help address isolation and associated mental health issues.

In late 2019, the report Emerging Trends in Real Estate Europe picked co-living as the sector with the third-best prospects for the coming year. By autumn 2020, it had slipped to 14th out of 27.

FURTHER READING

SOCIAL MOBILITY

Life chances still influenced by family affluence

H1

ACT

PLAN

TRACK

PARK

OPP

THR

NEU

In the Fourth Industrial Revolution, human capital is the driving force of economic growth. Yet across most economies, children born in less affluent families tend to experience greater barriers to success than those born in more affluent families. These inequalities of opportunity may become entrenched and foster long-term economic inequalities as well as deep economic and social cleavages. Most economies are failing to provide the conditions in which their citizens can thrive, often by a large margin. As a result, an individual’s opportunities in life remain tethered to their socio-economic status at birth, entrenching historical inequalities.




This is a major problem not only for the individual, but also society and the economy.

[With a score of 74.4, the United Kingdom ranks 21st on WEF social mobility index.](#)

Despite a high score on the Education Access pillar (82.5), it lags behind its regional peers in overall Education Quality and Equity (69.1) and has significant disparities in educational quality between schools, and limited social diversity within schools.

[A 2020 impact assessment](#) estimates the cost of low levels of social mobility on the economic growth of the United Kingdom. According to this analysis, low social mobility will cost the UK economy £140 billion a year over the period to 2050, amounting to £1.3 trillion in lost GDP over the next 40 years.





Ideas to address the issue include:

-  policies that address wealth concentration and broadly re-balancing the sources of taxation can support the social mobility agenda.
-  more support for education and lifelong learning and a new agenda for promoting skills development throughout an individual’s working life.
-  developing a new social protection contract which would offer holistic protection to all workers irrespective of their employment status, particularly in a context of technological change and industry transitions.



FURTHER READING

◀ SOCIAL HOME PAGE

IMPLICATIONS FOR UNITE

-  The rapidly growing middle class in the developing economies of Asia could signal a continues rise in those wanting an overseas education. Is Unite ready to capitalise on those emerging markets?
-  Generation Alpha have different experiences and different expectations which Unite will need to understand as it plans its student offer in future.
-  Will the continuing lack of social mobility in the UK pose a challenge to the numbers of young people wanting the university experience?
-  Young people are engaged in society, though in different ways from previous generations. Is there a opportunity for Unite to use that civic activism to help manage isolation and mental health issues in its properties?
-  Unite could suffer from disgruntled tenants spreading false or misleading claims through social media. How will it respond to fake news?
-  The radical changes in city centres as a result of changing shopping patterns and an increase in home working offers Unite an opportunity to be part of the regeneration and repurposing of city centre buildings.
-  Equally, the trend towards rented accommodation could be an opportunity to provide a quality, branded product to a new generation of renters. Whether that offer will be part of a more flexible, mixed-use development remains to be seen.

STRATEGIC UNCERTAINTIES

-  The changes in population the UK and across the world can be predicted with some accuracy. What is less clear is how those changes will affect future demand for higher education and who will pay for it individuals, employers or government.
-  Young people will be facing increasing uncertainties after they leave education - in housing, employment choices and health. Does that uncertainty offer Unite an opportunity to moment new markets and create products for recent graduates.

START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

TECHNOLOGICAL

02

How will technical  
developments impact on the  
work of Unite Students?

ENGAGING THE  
AUDIENCE

Gaming platforms are an  
emerging channel for live  
streaming, sponsorship and  
product placements

SAFE AND  
SECURE?

57% of IT decision makers  
believe that remote workers  
will expose their firm to the  
risk of a data breach

UNCOMMON  
STANDARDS

Competing approaches to  
cybersecurity threaten  
global stability

QUANTUM  
COMPUTING

The first commercially  
relevant applications of  
quantum computers may  
appear within the next two  
or three years

KEEPING HUMANS  
IN THE LOOP

AI is helping the San Diego  
economy by creating more  
jobs, not eliminating them

THE AI SKILLS  
GAP

New research by Microsoft  
reveals that the UK has  
lower AI maturity, adoption  
levels and workforce skills  
than its competitors

GENE THERAPY

The UK is likely to remain  
one of the top international  
destinations for graduate  
education

CLEAN MEAT

The UK is likely to remain  
one of the top international  
destinations for graduate  
education

RESEARCH  
CULTURE

More people want to do  
research - but the culture  
needs to improve

TECHNOLOGY  
CARES

A range of technology to  
support elders who want to  
continue living at home  
instead of moving into  
nursing homes

MOBILITY AS A  
SERVICE

The integration of various  
modes of transport along  
with information and  
payment functions into a  
single mobility service

AUTONOMOUS  
VEHICLES

Autonomous trucks are  
being used in trials for  
running between  
warehouses and delivering  
goods for Lidl

TRUSTWORTHY  
AUTONOMY

The possible applications of  
independently acting  
machines

THE HYDROGEN  
ECONOMY

Government will work with  
industry to evaluate  
hydrogen as an option for  
heating homes and  
workplaces



ENGAGING THE AUDIENCE

Leveraging gaming as an engagement channel

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[Research on the world of gaming](#) indicates that 81% of internet users game on at least one device each month. Amongst 16-24 year olds, the number rises to 91%. The increase in online multiplayer games that put the gamer at the heart of the experience (like [Overwatch](#) and [Fortnite](#)) has accelerated interest.

4 in 10 gamers actively follow esports, watching both live streams and tournaments and broadcasting their own gameplay. The individuals at the forefront of esports, dubbed “E-Athletes”, are influential celebrities in their own right. Tyler Blevins, a leading E-athlete, accumulated 22 million subscribers on his YouTube channel in 2019, and signed with Adidas as a brand ambassador in 2020.

No wonder then that brands like Amazon, Google, Facebook and Apple are making big bets on gaming as an [engagement channel](#) for delivering live streaming, sponsorships and product placements.

In January 2021, the United Nations Development Group (UNDP) and University of Oxford published the results of the [Peoples’ Climate Vote](#), a survey of public opinion on climate change. Poll questions were distributed through advertisements in mobile game apps in 17 languages, which resulted in a huge, unique, and random sample of people of all genders, ages, and educational backgrounds. 1.2 million people from 50 countries responded, making it the largest survey on opinion on climate change ever conducted.

SAFE AND SECURE?

Cyber security training is essential

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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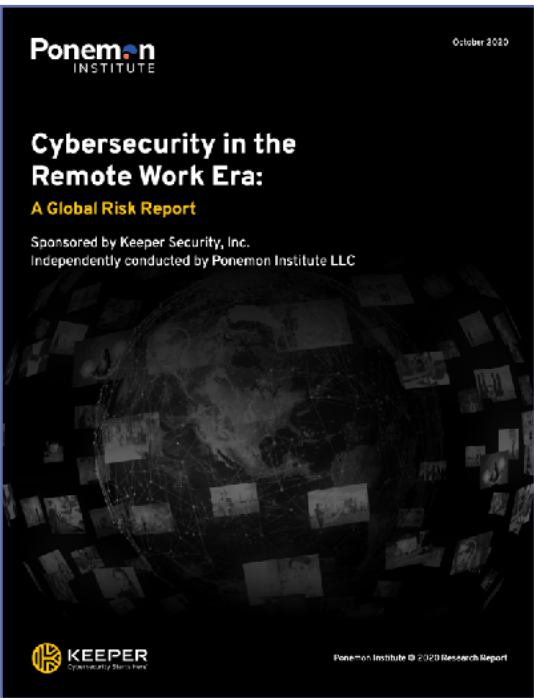
[One in three UK workers are currently based exclusively at home](#). It’s the [same in the US](#). And it’s creating a major headache for IT security teams. One in five UK home workers has received no training on cyber-security, according to [a November 2020 survey](#). The survey also found that two out of three employees who printed potentially sensitive work documents at home admitted to putting the papers in their bins without shredding them first. A [separate UK study](#) from April 2020 found that 57% of IT decision makers believe that remote workers will expose their firm to the risk of a data breach.

Companies need to ensure that

- ❖ All staff are using a dedicated and correctly configured work laptop. Personal laptops - particularly those shared by other family members who may be gaming or downloading from file sharing websites - must be regarded as insecure
- ❖ Remote computers have secure and encrypted connections through a [VPN or virtual private network](#), not a personal one that may be infected with malware
- ❖ Staff are fully aware of - and do not act on - “phishing” emails designed to trick someone into handing over sensitive data or downloading malware
- ❖ All staff receive proper cyber-security training
- ❖ Firms have policies in place so that staff know who to immediately report a threat to and that they are not afraid of repercussions - which might lead them to cover up mistakes

Cyber security expert Tim Sadler, CEO, Tessian, notes: “Time and time again we see how simple incidents of human error can compromise data security and damage reputation. The thing is that mistakes are always going to happen. So, as organisations give their staff more data to handle and make employees responsible for the safety of more sensitive information, they must find ways to better secure their people. Education on safe data practices is a good first step, but business leaders should consider how technology can provide another layer of protection and help people to make smarter security decisions, in order to stop mistakes turning into breaches.”

FURTHER READING



UNCOMMON STANDARDS

Competing approaches to cybersecurity threaten stability

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[The technologies and standards](#) that underpin communication around the world are, for the most part, global and interoperable. Common standards mean that designs can be checked once by all interested parties; interoperability means that errors and vulnerabilities are likely to be caught early. From a cybersecurity perspective, this is positive, enabling nations to secure systems at a scale that was previously impossible. This stability and interoperability is, however, under threat as nations states edge closer to balkanisation of technology and standards.

States have been weaponising information for some time now, breaking into other countries’ networks to steal data, seed misinformation or disrupt infrastructure. And now - because they don’t like the increase in strategic dependence on other states - they are developing their own standards and technologies that diverge from global commons and which embody their values. This signals a fundamental shift in how technology is developed, owned, accessed and leveraged by nation states and companies. New alliances will form around the creation of indigenous and sovereign versions of the technology we use to communicate and manage modern life. We will see standards bodies fragment and supply chains and infrastructure redesigned to align with these new realities. States will start to take more drastic action to ensure that their supply chains are protected, and that their sovereign “silicon-to-service” technology stacks are insulated from the actions of others and enforce their national values.

The global debate around 5G security has led to a position where we will likely see two independent camps moving forward, ostensibly led by the US and China. Other nations will have to decide which camp better serves their national interest, since the companies that produce this technology are bound to those countries. This will establish a pattern which will be repeated across other critical technologies. In this world, the multi-stakeholder approach to standards that ensures no one party has too much power will be critical to ensure we can continue to do cybersecurity at scale.

If we fail, the world will become less connected, less resilient and less secure.

QUANTUM COMPUTING

Transformative tech or empty promise?

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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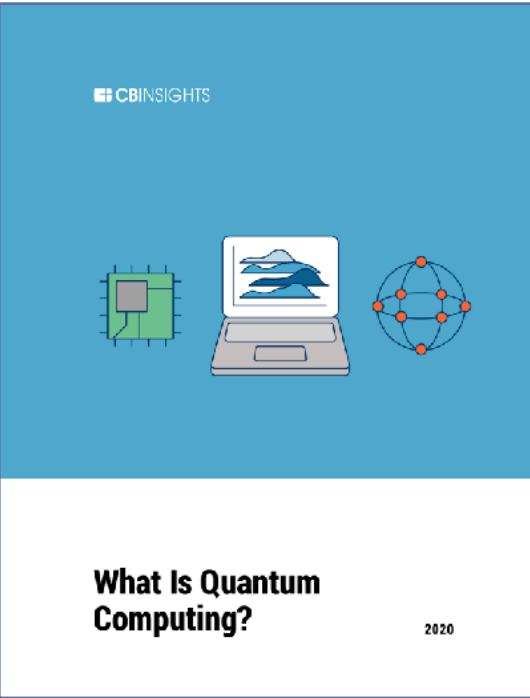
Big, stable quantum computers would be useful devices. They could perform some calculations faster than any non-quantum machine - searching a database, precisely simulating complex chemical reactions to aid drug development of drugs, speeding up the analysis of optimisation problems for (eg) the transport industry (by finding efficient routes) and finance (by maximising profits given a set of constraints). Boston Consulting Group foresees quantum computers improving the operating income of their users by between \$450bn and \$850bn a year by 2050.

Unfortunately, big, stable quantum computers do not yet exist. But small unstable ones do. John Preskill, a quantum-computing researcher at the California Institute of Technology, dubs such machines nisqs—Noisy, Intermediate-Scale Quantum computers. A growing number of companies and investors are hopeful that nisqs themselves will be able to do useful work in the meantime. These firms are hunting for “quantum advantage”— a way in which even today’s limited machines might have an impact on their bottom lines.

The big question is what all this is leading up to. There is plenty of promise, but, as yet, no certainty. Finding algorithms that are both commercially useful and simple enough to work within a nisq machine’s limitations is not easy. A report published last year by America’s National Academy of Sciences reminded readers that no commercial applications are currently known to exist.

Optimists think that, with a bit of luck and progress, the first commercially relevant applications of quantum computers will appear within the next two or three years. In particular, he reckons it is worth keeping an eye on the finance industry, where quantum computers could boost trading algorithms and portfolio management. “To develop a new battery or a new drug you have to test the product,” he points out. This can take years. A slick new financial algorithm could be deployed in days. And given the scale of the markets, even a tiny advantage could be worth a great deal of cash.

FURTHER READING





KEEPING HUMANS IN THE LOOP

People are essential to the ethical application of AI

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[Measuring the Future: AI and San Diego's Economy](#) is the first in a series of reports detailing key industries and clusters where AI and machine learning (ML) have been implemented in San Diego, a global leader in deploying AI. The research reveals that

- 54% of respondents said that AI is increasing the need for more workers at their businesses
- 63% said that the use of AI has created new job opportunities at their firm
- 62% of AI developers expect to see the number of employees specifically engaged in AI-related work grow over the next 12 months - despite current economic conditions

The findings emphasize the importance of keeping “humans in the loop” as the technology evolves, said Joe Rohner, Principal at Booz Allen and leader in the firm’s analytics practice and AI services business. Indeed, the study references [research conducted by MIT Sloan Management Review and Boston Consulting Group](#) that found returns on investment for AI are greatest among firms that incorporate the technology alongside the workforce rather than using it as a substitute for workers.

“One of the biggest takeaways from this report is that local respondents indicate that AI is truly helping the San Diego economy by creating more jobs rather than eliminating them,” Rohner said. “People are essential to the [ethical application of AI](#), and this technology will empower organizations and – importantly – their workforce to increase productivity, quality, and efficiency.”

According to the study, 31% of jobs in AI-concentrated fields require only a high school diploma, with this segment of jobs paying an average of \$22.42 per hour. Looking more broadly at the workforce and economy, every new 1,000 jobs in the AI-concentrated industries launches 1,400 jobs in other industries.

This finding - that the best AI talent is found in people who have *avoided* going to university - echoes [research carried out elsewhere](#).

THE AI SKILLS GAP

The UK has some catching up to do

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[New research by Microsoft](#) reveals that the UK has lower AI maturity, adoption levels and workforce skills than its competitors. The findings reveal that:

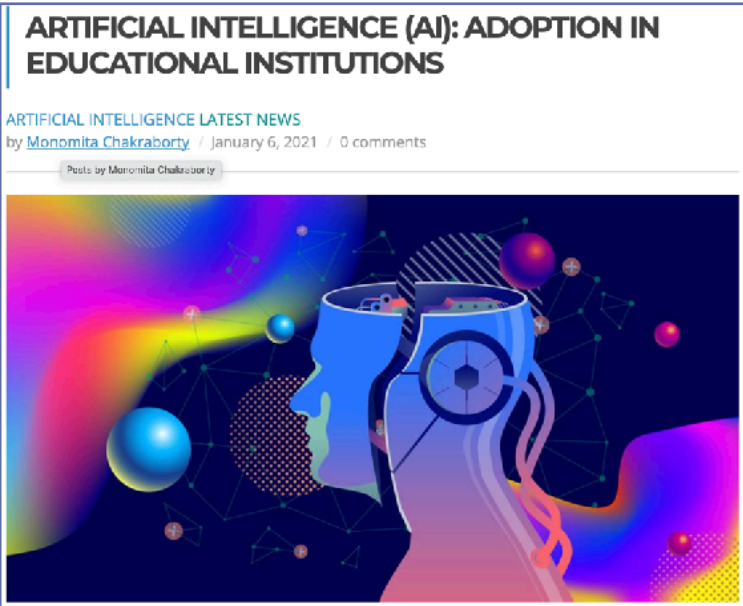
- 15% of UK companies can be classified as advanced ‘AI pros’ - compared to 23% of global companies
- 52% of UK employees are using AI to work faster and smarter - compared to 69% of employees globally
- 35% of UK business leaders foresee an AI skills gap in the next two years. 28% say we already have one
- Only 17% of UK employees are being re-skilled for AI, compared to 38% globally

Previous research from Microsoft UK has shown that organisations embracing AI outperform the competition by 11.5%. To close the AI skills gap, organisations need to invest in building the skillsets of their workforce, focussing on four key steps:

- Embrace AI** - employers should demonstrate the benefits of AI to their employees, so they understand how new technology makes their jobs quicker and easier, enabling employees to focus on less manual and more strategic tasks
- Create agile workers** - as AI changes the way we work, businesses will require people and their skills to change with it. Continuously and in response to changing market need
- Reskill employees** - business leaders need to work proactively to help their teams stay on the cutting edge, minimising talent gaps by building, extending and expanding the skills of their current team
- Dedication to lifelong learning** - businesses must invest in digital talent platforms that foster workforce learning and build a culture of continuous learning to develop competencies that can be nurtured over time.

A [January 2021 report to government](#) by the AI Council suggests that AI could deliver a 10% increase in UK GDP in 2030 if approached correctly. The report suggests near-term directions for all government departments to get the ball rolling.

FURTHER READING



GENE THERAPY

Near curative capabilities - and more - on offer

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Multiple companies are delving into gene therapy research with hopes of developing a one-time treatment for genetic diseases. Research is still in the early stages and, over the past year, several clinical studies have been halted or scrapped due to safety concerns.

Hundreds of millions of research dollars are nevertheless being invested in gene therapies because of the potential near-curative capabilities the technology could offer. In December, life sciences giant [Bayer launched a cell and gene therapy platform](#) within its pharmaceutical division in order to become a leading global company. Eli Lilly also jumped in, [acquiring Prevail Therapeutics](#) in December 2020. In January 2021, German scientists reported they were able to use [gene therapy to help paralyzed mice run again](#). Scientists in China announced the development of a gene therapy that could potentially [reverse the effects of ageing](#).

Harvard University and the Massachusetts Institute of Technology are leading partners in a [new public-private partnership to open a new facility to boost advances in cell and gene therapies](#). Part of the goal of the institute will be to boost the supply of materials for research and early clinical studies, provide space for some research and also offer training in equipment used for gene therapies.

Writing in [Nature](#) in 2020, Zhang Feng, Professorship in Neuroscience at the [McGovern Institute for Brain Research](#) and at the [Massachusetts Institute of Technology](#) wrote that “to fulfil the potential of gene therapy and ensure that all patients have access to this revolutionary treatment, scientists will need to continue developing delivery approaches that are practical and widely usable, to refine molecular technologies for gene editing, to push our understanding of gene function in health and disease forward, and to engage with all members of society to openly discuss the risks and benefits of gene therapy.”

Post Brexit, the UK has more freedom to apply the technology and in January 2021, [Defra launched a 10 week consultation](#) on how gene editing could 'help farmers with crops resistant to pests, disease or extreme weather and to produce healthier, more nutritious food'.

CLEAN MEAT

Ethical, healthy and environmentally friendly

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Canadian researchers have [developed a new form of cultured meat](#) that promises more natural flavour and texture than other alternatives to meat from animals. Published in the journal [Cells Tissues Organs](#), the method used by researchers at McMaster University in Canada is based on stacking very thin layers of muscle and fat cells grown in the lab to form “slabs of meat.” The researchers say they can replicate the marbling and fat content of any piece of meat with this new technique. The method can be adapted to beef, pork, or chicken, and is suitable for large-scale production.

Cultured - or clean - meat allows consumers to maintain their dietary preferences for animal meat while removing any moral, health and environmental considerations that may be associated with current production.

There are still technical issues to resolve before production at scale is guaranteed - but the global [clean meat market is still expected to be worth around \\$600 million by 2032](#). Key players include Memphis Meats (US), MosaMeat (Netherlands), Integriculture (Japan), Aleph Farms Ltd (Israel), Finless Foods Inc. (US), Avant Meats Company Limited (China), and Shiok Meats (Singapore).

In December 2020, US start up Eat Just’s cultured chicken was [approved for sale](#) as an ingredient in chicken nuggets in Singapore restaurants in a world regulatory first.

FURTHER READING

TECHNOLOGY HOME PAGE



RESEARCH CULTURE

Must do better

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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COVID-19 has thrown science into the spotlight and created a [pandemic effect](#) - inspiring more people to apply for science courses at university. But [recent research by the Wellcome Foundation](#) paints what Director Jeremy Farrar describes as “a shocking portrait of the research environment – and one we must all help change.” Key findings include that the research culture enables unhealthy competition, bullying and mental health issues:

- 78% of researchers think that high levels of competition have created unkind and aggressive conditions. 61% of researchers have witnessed bullying or harassment; 43% have experienced it themselves.
- 53% of researchers have wanted professional help for depression or anxiety.

It also highlights a lack of managerial skill

- Most researchers (80%) are confident in their people management skills - but only 48% have received any training. Those being managed often miss out on critical aspects of good management – only half have received feedback on their performance (55%) or had a formal appraisal (49%) in the past year.

Critically, perhaps, the report highlights that creativity - one of the most commonly cited features of an ideal research culture - is being squeezed out by a system that favours quantity over quality:

- 75% of researchers believe creativity is being stifled
- 69% of researchers think that rigour of results is an important research outcome - but one in five junior researchers and students (23%) have felt pressured by their supervisor to produce a particular result
- 43% believe the workplace puts more value on metrics than on research quality









Wellcome sets out [a challenge to the community](#): to make meaningful progress against the inequalities in the sector and to build the culture researchers want to see. A culture, of course, that will make science a better career for all those inspired to enter it and join the global fight against disease.

TECHNOLOGY CARES

Supporting healthy living

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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CES2021, the consumer electronics show, unveiled a range of technology designed to support elders [who want to continue living at home](#) instead of moving into nursing homes.

-  [Zibrio](#), a scale that assesses users’ balance to predict if they are at risk for a fall, can also be incorporated into at-home routines.
-  For people with chronic conditions, [Folia Health](#) helps monitor the progress of treatments
-  [Mighty Health](#), an app that pairs users with health coaches, certified trainers and personalized nutrition plan
-  [FallCall Solutions](#)’ Apple Watch apps that send alerts when a fall is detected and help family members check on users
-  [Nobi](#), a smart lamp that automatically turns on when users stand up and sends alerts to family members if they fall. some is aimed at caregivers who need assistance
-  [Caregiver Smart Solutions](#) is a multifaceted platform that makes it easier for seniors to stay at home with a machine-learning-based app for early detection of potential health issues, fall sensors, monitors and emergency buttons
-  For people with incontinence, [DFree](#), a wearable device, can reduce stress by monitoring how full their bladder is with an ultrasound sensor and keeping track of their average time between bathroom visits. It’s available for both consumers and healthcare facilities
-  [Rendever](#) is a virtual reality platform that wants to help reduce isolation. It can be used with reminiscence therapy, which guides individuals with dementia through experiences that remind them of their pasts and to allow virtual travel to landmarks. [Cutii](#), a companion robot, also seeks to reduce loneliness. While companion robots have been around for years, Cutii sets itself apart with entertainment like music, games and live events. It also has video call and night patrol features

FURTHER READING

TECHNOLOGY HOME PAGE

MOBILITY AS A SERVICE

Intelligent transport solutions?

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The Department for Transport’s [Future of Transport Programme](#) is exploring how mobility as a service (MaaS) might transform transportation. MaaS is defined as ‘the integration of various modes of transport along with information and payment functions into a single mobility service’. MaaS envisions an urban resident choosing from all available transportation modes on a single platform, like an app. She can then use that app to book individual trips, or can purchase a subscription that gives her a basket of mobility services. Ultimately, MaaS is seen as an intelligent solution; the traveller simply tells the app where she wants to get to, by when, and the app makes all the choices for her. Routing and choice of mode can be updated in real time to accommodate delays or missed connections.

MaaS is prominent in current policy thinking around the world - but it has found limited traction among urban residents, even in favorable markets. In Antwerp, Belgium, for example, local law requires mobility operators to integrate with at least two MaaS platforms, but in the surrounding region of Flanders just 3% of transit tickets purchased on mobile phones are bought through a MaaS app.

A [2020 survey by Ipsos Mori on behalf of DfT](#) found that MaaS needs to offer cost efficiency and convenience to users. In addition, consumers will need confidence that MaaS delivers

- Value for money of travel, bringing modes together in one platform
- Accurate real-time information regarding cost-efficient travel options, alternative routes to use during travel disruption and sustainable travel options to support travel decision-making and potential modal shift.
- Data security for personal information
- Accessibility needs and preferences.

AUTONOMOUS VEHICLES

Delivering promise

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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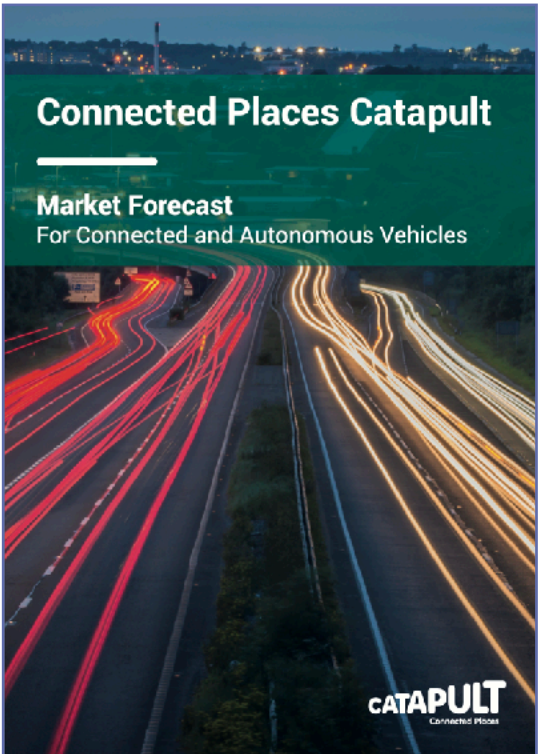
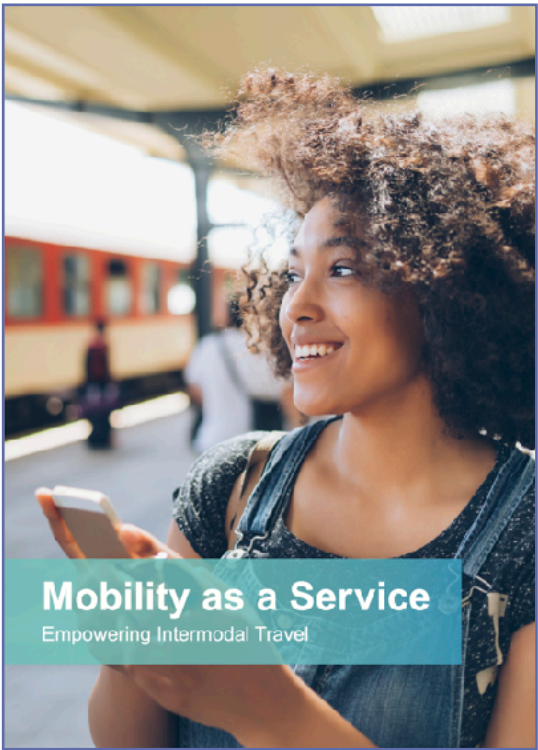
The Pod is an autonomous truck made by Swedish firm [Einride](#) and already being used in trials for running between warehouses, hauling logs from forests and delivering goods for Lidl. Pods use the same technology of cameras, radar, lidar (the optical equivalent of radar) and satellite-positioning as other contenders in the field, but they differ in the way they deal with the regulatory concerns which prevent fully autonomous vehicles from being let loose on public roads.

The first difference Einride’s is to avoid the public roads in question. Instead, the Pod’s first version operates on designated routes within the confines of enclosed, private areas such as ports and industrial parks. Here, Pods act like bigger and smarter versions of the delivery robots which already run around some factories—though by having the ability to carry 16 tonnes and with room on board for 15 industrial pallets’-worth of goods they are indeed quite a lot bigger.

The second difference is Einride’s approach to the word “autonomy”. Some makers aim to keep humans out of the decision-making loop entirely. Others arrange things so that a normally passive human occupant can take the controls if necessary. Pods represent a third way. They always have a human in the loop to keep an eye on what is happening and to take over the driving for a difficult manoeuvre or if something goes wrong. But this human operates remotely. Having the driver sitting back at HQ rather than in the vehicle itself is a departure from convention, but not a huge one. Aerial drones are usually controlled in this way.

The radical step is that Einride believes you do not need a remote driver for each Pod. Einride already uses one person to control two Pods, but plans eventually for a single driver to look after ten. How regulators will take to that for use on open roads remains to be seen. Much will depend on how often the remote driver has to intervene. If not very often then monitoring simultaneous Pods might be considered acceptable.

FURTHER READING





TRUSTWORTHY AUTONOMOUS SYSTEMS

Acting independently

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Swarming is a collective behaviour exhibited by insects and birds when they aggregate together to accomplish tasks such as migration. [One field of robotics that is maturing fast is dedicated to building swarm intelligence](#) - multi-robot systems that can interact with each other for problem-solving. Swarm robots can investigate and analyse complex systems and determine appropriate courses of action. Research at Bristol University is aimed at [using artificial evolution to develop robots with the capacity to learn swarm behaviours](#). Robotics could replace humans in work too dangerous to do such as Toxic waste clean up. A swarm could, for example, investigate a toxic waste site autonomously and instruct and execute clean up efficiently and without any human intervention.

The potential is enormous. Researchers in Germany have developed micro and nano-sized robots that can autonomously move in the opposite direction to the way a fluid flows. This makes them particularly promising for intervening inside the human body. Among other things, these robots could be used to carry drugs, genes or other substances to specific sites inside the body, opening up new possibilities for treating different medical conditions.

[Future robotics may allow machines to learn from problems they confront](#), write their own instructions and then respond to sudden external changes. This means that autonomous systems can change their behaviour from what was initially programmed, thus becoming independent from human controllers. They would not be limited to what is written in their system; they would become smarter, artificially intelligent and perhaps even more 'aware'.

This raises important issues around ethics and the design of trustworthy machine systems ad UK Research and Innovation's (UKRI) [Trustworthy Autonomous System's \(TAS\) program](#) has granted each of six university research nodes £3 million in funding, in order to look at the processes used to design fully autonomous systems and the associated legal, ethical and social contexts for the possible applications of independently acting machines.

THE HYDROGEN ECONOMY

The gas is greener

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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One of the key committees in the [Energy White Paper](#) is that government will work in partnership with industry to evaluate hydrogen as an option for heating homes and workplaces and will develop plans for a possible pilot hydrogen town before the end of the 2020s.

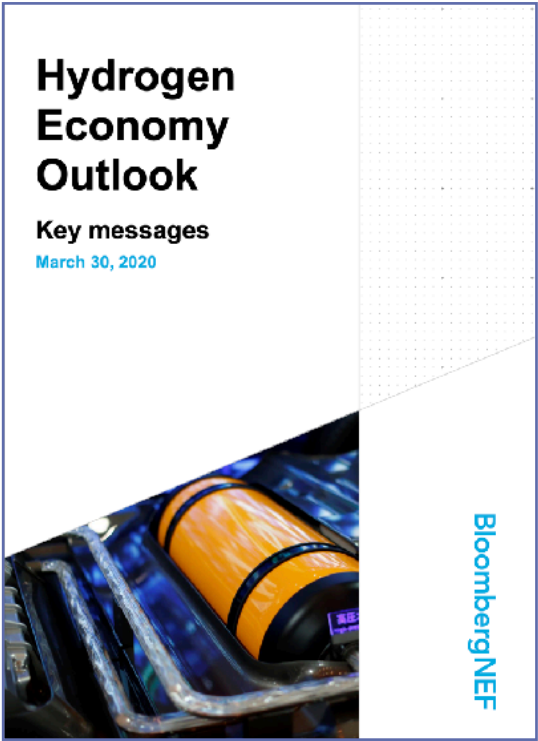
The UK is not alone. Hydrogen is among President Biden's new energy plans for the US - a clean energy revolution that aims to create 10 million new jobs - and EU member states have agreed to rapidly upscale the market for hydrogen at the EU level. [Canada](#) and [Australia](#) are amongst other nations also developing a hydrogen strategy.

China - already the world's largest producer of hydrogen (but 'grey' hydrogen made from coal and gas rather than 'green' hydrogen from renewable sources) - is [joint venturing with Shell](#) to build hydrogen refueling stations in Zhangjiakou City, which will host part of the 2022 Beijing Winter Olympics. In [a report](#) published in the Green Belt and Road Initiative Center, authors Mengdi Yue and Christoph Nedopil Wang noted that between 2017 and 2020, China had established 61 hydrogen refuelling stations, developed the first fuel cell-powered tram, and successfully tested a manned aircraft powered by hydrogen. The indications are that [China could become the global leader](#) in renewable hydrogen.











Figures from the [International Energy Agency](#) reveal that global low-carbon hydrogen production is expected to reach 1.45 million tonnes in 2023 (up from just 0.04 million tonnes in 2010) based on new hydrogen plants opening around the world. The cost of producing hydrogen power is falling at a dramatic rate, with figures from the US Department of Energy predicting a fall from \$6kg-1 in 2015 to \$2kg-1 by 2025.

This significant decline falls neatly within the timeframe of environmental benchmarks such as the Paris Climate Targets, and there is hope within the hydrogen industry that the energy source will be integral to meeting these goals




FURTHER READING



IMPLICATIONS FOR UNITE

-  Might gaming become an important channel for advertising and building brand loyalty? How might Unite establish itself in the gaming world? Are there sponsorship options for Unite?
-  Is Unite cybersecure? How does it know? Are staff properly trained - and is the business culture forgiving of individuals who may have compromised data security? Finally, what is Unite’s long term plan for increasing data security post Covid?
-  How is AI being deployed by Unite and its competitors to improve services and strengthen the customer relationship? Is Unite keeping up to speed? Or is it lagging behind? Are there places in the service offer where that relationship might be better served by AI solutions? Is Unite facing an AI skills gap that might impact on performance?
-  How will artificial meat play in the market place? Might its low carbon footprint make it a differentiator? What could it mean for young people’s choices and preferences in the future?
-  What role does technology have in supporting the lifestyle choices and challenges facing students? Might some technologies be developed that can measure and influence wellbeing and mental health? Might future generations of students want wearable devices and remote/VR/AI health diagnostics?
-  Could some mental health diagnostics be linked to learning and performance?
-  If MaaS takes off in the UK, it seems likely that it will see investment focussed on areas of high population density and scale. Might MaaS make some locations more competitive and others - which don’t have MaaS - less competitive? Are there implications for Unite’s location choices?
-  Is the same true of autonomous and connected vehicles - or is that not relevant?
-  What might the applications be for swarming micro robots? How might they be applied to building maintenance, construction or environmental control systems?
-  How will Unite track (or fast track) the development and deployment of green hydrogen for heating in its housing? Is there scope for Unite to act as a pilot site? Might hydrogen powered heating become a key differentiator in the market place?

STRATEGIC UNCERTAINTIES

-  Will Unite be an early or late adopter of new technologies?
-  Will Unite acquire a *reputation* as an early or late adopter of new technologies? Does it matter?
-  Will Unite prioritise key technologies that align with the value set and personal interests of its student client groups - or wider co-housing interests?



START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

# ECONOMIC

03

What are the economic forces that will create opportunities and challenges?

## THE 'C' FACTOR

The economy post Covid will bring new challenges and accelerate existing trends.

## FULL CIRCLE

The economic, and political, future will lie in Asia. Where and how will they lead?

## OPEN BOOKS

Investors, customers and regulators are all pushing companies to improve their ESG performance and reporting.

## CIRCLE THE WAGONS

Protectionist policies are on the rise - and the UK is particularly vulnerable. Covid has added to those tendencies.

## ROUND AND ROUND WE GO

Circular economy systems offer ways of organising a business to minimise environmental impact and resource use.

## INDUSTRY 4.0

New technologies and changing consumer demand is driving huge disruption across many industries.

## DO YOUR HOMEWORK

Even after the pandemic many people will choose to work from home

## GET BACK TO WORK

The need for socialisation and collaboration will drive people back to the office. But will it look the same?

## WORKIN' 9 TO 5

Flexible working and four day working weeks may become the norm for many workers.

## FAIR'S FAIR

Covid has exposed the scale of inequality in the UK. It also provides an impetus for change.

## JOBS OF TOMORROW

New jobs will require constant retraining and are likely to require a mix of technical and soft skills.

## REACH FOR THE DOUGHNUT

A few cities and regions are starting to adopt 'doughnut economics' as a way to address social and environmental issues.

## THE BITCOIN EFFECT

Cryptocurrencies are on a roller-coaster ride. What long-term future do they have?

## WELLBEING AT WORK

A healthy workplace is good for both companies and staff and helps attract talent.

THE ‘C’ FACTOR

The economy post Covid

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Four major factors driving change. We know that:

- many businesses, and jobs, can work largely online
- the economy has taken a major hit (especially some sectors) and will take a long time to re-adjust
- the need to repay the colossal sums of government support will lead to reduced public services or higher taxes, or both
- there is pressure from some activists to use the opportunity to build back ‘better’ / ‘different’

Some forecasts suggest a 5.2% contraction in global GDP. Many countries will be facing a recession when this pandemic is over and their government support to the economy ends. This year’s UK government budget deficit will reach almost £400bn, more than twice the peak recorded after the 2008 financial crisis. It has already taken government debt to more than 100 per cent of GDP, a level portrayed as apocalyptic in the somewhat fevered debates that led to "austerity" in 2010. Also, in the wake of Covid-19, there will be a long tail of joblessness, mental health issues, homelessness, bankruptcies.

While it will be hard to pick winners post covid, there are signs that:

- Businesses that use cloud computing have not buckle under the pressure of the coronavirus pandemic.
- Further automation and artificial intelligence will enhance the resilience of supply chains.
- Successful businesses will have a combination of resilience and agility.

Resilience will be at the forefront of every strategy. yet it is agility that will ensure competitiveness, and an ability to respond to the unexpected. To achieve this, businesses will have to re-evaluate where they must be strong and where they must be flexible.

FULL CIRCLE

Asia steps back onto the centre of the economic stage

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Despite continuing concerns about economic turbulence and concerns over financial (and viral) contagion, it is likely that there will continue to be a shift in global economic power away from established advanced economies towards emerging economies in Asia and elsewhere.

Global economic growth will be driven by emerging market economies, which will gradually increase their share of world GDP over time, leading to a doubling of the global economy by 2042. The E7 economies - Brazil, China, India, Indonesia, Mexico, Russia and Turkey - will grow at an annual average rate of 3.5% to 2050, compared to just 1.6% for the advanced G7 nations of Canada, France, Germany, Italy, Japan, the UK and the US.

The Asia Pacific Regional Comprehensive Economic Partnership trade pact, signed in November 2020, covers the 10 ASEAN nations of South-East Asia, plus mainland China, South Korea, Japan, Australia, and New Zealand. The agreement will immediately eliminate tariffs and quotas on 65 per cent of goods traded within the region and remaining tariffs will be liberalised over the next 20 years. It is a ‘high-quality’ agreement that also aims to tackle non-tariff trade barriers in areas such as services, investment, e-commerce, competition, government procurement, intellectual property and the movement of people.

As a recent McKinsey report put it: “One of the most dramatic developments of the past 30 years has been emerging Asia’s soaring consumption and its integration into global flows of trade, capital, talent, and innovation. In the decades ahead, Asia’s economies will go from participating in these flows to determining their shape and direction. . . . The question is no longer how quickly Asia will rise; it is how Asia will lead.”

By 2031 two-thirds of the global middle class (defined by Ernst Young as those who earn between US\$10 and US\$100 a day) will live in the Asia-Pacific region - increasing spending power from this region significantly. China’s middle class is set to grow from 150mn to 1bn by 2030 (70% of its population). India’s middle class is set to grow from 50mn to 475mn by 2030.

FURTHER READING

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OPEN BOOKS

ESG reporting goes mainstream

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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There are an increasing number of reasons for companies to consider improving their sustainability performance.

While a growing trend over recent years, 2020 has seen a surge in investors seeking to include ESG issues in their assessment of company stocks. This is driven by a range of factors from younger people seeking to take a more values based approach to investment, to an avoidance of downside risks. When [Blackrock, with \\$7t in assets announced that it was building sustainability into all its lending going forward](#).

Much of this is driven by the climate crisis and the potential for major risks to investment portfolios. It is also influenced by consumer sentiment, which in turn has influenced the pension funds. Divest movement has been gaining traction. In April 2020, a total of 1,192 institutions and over 58,000 individuals representing \$14 [trillion](#) in assets worldwide [had begun or committed to a divestment from fossil fuels](#).

Institutional investors, such as pension funds and insurers, represent long-term beneficiaries who have a natural interest in preserving wealth in their investment portfolios. [In this agenda, extra-financial factors \(“ESG”\) have a key role to play](#). There is a growing consensus in the financial community that taking ESG issues into consideration is consistent with the fiduciary duty of investors when it impacts financial returns. ESG issues such as climate change, resource scarcity, misaligned executive compensation or corruption for instance, can have material impacts on long-term investment portfolio performance

CIRCLE THE WAGONS

The rise and rise of protectionist policies

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Protectionism is on the rise everywhere. 60 of the world’s largest economies have adopted more than 7,000 protectionist trade measures (on a net basis) since the financial crisis in 2008. Whilst the US takes the headlines in terms of the protectionist policies it has (and intends to) implement, it is argued that the EU has become harder for those non-member countries to trade within it. The so called ‘populist age’, starting with the inauguration of Donald Trump, [has seen an acceleration of trade distortions](#).

Recent rise in protectionist measures reverses a 50 year trend toward trade liberalisation. Surveys suggest that business see a trade war as one of the top global risks. A [Bank of America / Merrill Lynch survey](#) found 1/3 of businesses expected protectionist measures to be the new normal - and possibility of including intellectual property and control of key technologies.

Since 2018, [the Bank of England](#) estimate that trade barriers between US and China have contributed to a slowdown in global growth - with direct effects on trade flows, supply chains and costs - also leading to greater business uncertainty. Recent research has revealed that the world’s top 60 economies have adopted more than [7,000 protectionist trade measures on a net basis since the financial crisis. Imposed trade tariffs are now estimated to equate to £300bn](#).

The UK has a relatively high risk of being affected by protectionism implemented by other countries, having a 57% dependency on trade as a percentage of GDP. The UK has been classified as the world’s eighth biggest victim of protectionist trading measures since 2009, but it is not blameless for the rise of protectionism, with many of its protectionist policies.

Governments around the world may turn even more protectionist in the near term as they try to limit the economic damage from the coronavirus pandemic. Deborah Elms, executive director at consultancy Asian Trade Centre [told CNBC’s “Capital Connection](#). “As countries get nervous about food stocks and food supply, food security, they’re going to stop allowing the export or restrict the import of food products,” she added.

FURTHER READING

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ROUND AND ROUND WE GO

The growth of circular systems

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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With the global population set to reach almost 10 billion by 2050, we need to find ways to make our resources more productive. Looking beyond the current take-make-waste extractive industrial model, [a circular economy aims to redefine growth, focusing on positive society-wide benefits](#). It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles:

- 🌱 Design out waste and pollution
- 🌱 Keep products and materials in use
- 🌱 Regenerate natural systems

Increasingly sophisticated data analytics and AI applications are offering exciting ways to track material usage and [accelerate the future of the circular economy](#) - including digitised waste systems and robotic recycling. Innovations are being introduced to [transform sectors such as clothing, plastics and food production](#).

Several large international businesses are already adopting such practices. For example, [Unilever has pledged to make 100% of packaging recyclable, reusable or compostable by 2025](#). This emphasis on greater environmental efficiency and longevity will increasingly be driven by populist opinion, as shown in the recent focus on [plastic waste](#).

Many companies have adopted [Extended Producer Responsibility \(EPR\)](#) as a form of product stewardship, although it is estimated that only 45% of product and packaging waste within the UK and Europe is currently covered by an EPR scheme. The Scottish Government are considering introducing a specific mandatory EPR system – a [national deposit return scheme](#) for drinks packaging. The Scottish consumer pays a small cash deposit, typically 10p, when they buy a canned or bottled drink which is then refunded when they return the item back to the retailer or a central collection point.

In Europe, there is also a developing regulatory focus on implementing circular economy solutions to its food systems. [The European Commission’s ‘Food 2030’](#) programme focuses on circularity and resource efficiency and the significant reduction of food waste.

INDUSTRY 4.0

Changing the economic landscape

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Two powerful forces are transforming the nature of consumption. The empowered consumer and disruptive technologies have sent businesses scrambling to find new strategies and business models for creating consumer value. At the same time, businesses have to overhaul their operating models to drive innovation and increase their market agility. This emerging phase is being termed the ‘Fourth Industrial Revolution’.

There will be an unprecedented level of digital disruption that will [affect entire systems of production, distribution and consumption](#). Digitalisation is transforming the way consumers discover, evaluate, purchase and use products and services. Consumers are increasingly demanding experiences, not just products, and have become active participants at every stage of the value chain – acting as innovators, marketers and even employees. Meanwhile, disruptive technologies (e.g. robotics, the Internet of Things, artificial intelligence) are driving a step change in business performance, and allowing businesses to offer once-impossible services. We can expect more and more innovations to take place at the borders of disciplines and sectors.

[The World Economic Forum projects that consumer industries will change more in the next 10 years than in the last 40 – and at an ever-accelerating pace of transformation](#). Businesses that thrive over the next 10 years will be those who embrace the empowered consumer and disruptive technologies. They will be data driven and externally oriented.

Covid has accelerated many of these trends. Even before the pandemic, [e-commerce penetration was projected to grow to approximately 40% in 2026](#). Physical stores will evolve from being a distribution channel to that of a platform for discovery, engagement, experience and interaction.

Automation in the service sector will also be a key driver. [Research from Oxford University argues that 47% of current occupations in the US are at high risk of being automated – including accountancy, legal work and technical writing. Alternative foresight work suggests that 30% of UK jobs face a similar threat](#). But there will be opportunities; an oft quoted figure is that [65% of children entering primary school today will work in jobs that don’t yet exist](#).

FURTHER READING



DO YOUR HOMEWORK

Working from home has never been easier

H1		ACT	PLAN	TRACK	PARK		OPP	THR	NEU
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Covid 19 has led to a significant amount of the workforce working from home, particularly office workers. Many staff have also found that this has given them more flexibility to balance work and other responsibilities such as home schooling or childcare. [Organisations should also be careful not to conflate flexible working and homeworking](#) – remote or homeworking is just one form of flexible working, of which there are many and the type of homeworking we have been experiencing recently is not the usual experience.

there are now [early indications](#) that many employees will wish to continue to undertake some degree of homeworking (or flexible working in general) after the current restrictions have passed.

The coronavirus crisis seems to have given many British workers a taste of the work-from-home lifestyle, and the results of a [recent YouGov survey](#) show that many will be reluctant to give it up once the pandemic is over.

Prior to the outbreak 68% of British employees never worked from home. Just one in three did, split between 13% who did so the whole time, and 19% who did so some of the time. But once the crisis is over, most (57%) of those who were working before the outbreak and who intend to stay part of the workforce say they want to be able to continue working from home.

But is it possible that the satisfaction and productivity people experience working from homes is the product of the social capital built up through countless hours of water-cooler conversations, meetings, and social engagements before the onset of the crisis? A [McKinsey report suggests that working from home may only be popular because it is temporary and not a permanent solution](#).

GET BACK TO WORK

Many staff crave the chance to work together

H1		ACT	PLAN	TRACK	PARK		OPP	THR	NEU
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Despite the fact that working from home has become normal for many and preferable for some, [3 in 4 workers hope to return to an office at some point in the future, according to a recent survey](#) of 2,033 office workers worldwide by the commercial real estate firm JLL.

Workers were also surveyed about their top priorities in the types of office spaces that would make the biggest impacts on their employee experience.

Nearly half of respondents said they hope their office will prioritise socialisation spaces, such as coffee areas, lounges or terraces. [As other experts have predicted](#) with the post-pandemic rise of hybrid arrangements, workers may choose to use their remote-work days for solo focused work; meanwhile, employers may dedicate their office buildings to gathering spaces for teamwork, collaboration and companywide networking events.

“It’s becoming clear socialising is important to people’s productivity, as well as career outlook and development opportunities,”

FURTHER READING

WORKIN’ 9 TO 5

Flexible working patterns will become the norm

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As professionals juggle the demands of work life and home life all in the same place, many employers have relaxed rules about workers starting and ending their days at a set time.

I think you’ll see a new norm around trust and respect” in the ways employers manage their staff moving forward, [says career coach Julie Kratz](#). “By all means, it’s not about throwing out all the rules,” she emphasises, “but it’s about letting people co-create them”.

This may also benefit women in the workplace - allowing them more flexibility to balance working, caring and home life. According to Elise Gould, senior economist at the Economic Policy Institute, [these policies could have a positive benefit on working women](#), allowing them to “make a schedule around the other responsibilities they have.”

In 2019, [Henley Business School](#) ran a research project involving over 500 business leaders and 2,000 employees, including businesses that have already implemented a four-day working week (33% of businesses surveyed), looking into the benefits, challenges and alternatives to a four-day working week. The main benefits found were:

- Improving the ability to attract and retain talent
- Increasing overall employee satisfaction
- Reporting lower employee sickness levels
- Increasing productivity.

These benefits have a huge financial impact: the combined savings to UK business is already as high as £92 billion a year, 2% of total annual turnover. And 75% of the businesses surveyed said that offering staff flexible working is important in retaining the ‘Quadgen’ workforce.

FAIR’S FAIR

Rising inequality has been made worse by the pandemic

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[The Deaton review of Inequality in Britain](#) demonstrates:

- The COVID crisis has exacerbated inequalities between the high- and low-paid and between graduates and non-graduates. The crisis has hit the self-employed and others in insecure and non-traditional forms of employment especially hard. Educational inequalities will almost certainly have been exacerbated by the crisis. The crisis has had very different impacts on different ethnic groups
- Through 2020, pensioners have on average reported becoming financially better off, whilst the young have borne the brunt of job and income loss.
- Covid mortality rates have been highest among some black groups and in the most deprived areas.

It is imperative to think about policies that will be needed to repair the damage and that focus on those who have suffered the most. "We need to build a country in which everyone feels that they belong."

An LSE survey, from November 2020, found that, overall, [the rate of not working is 12.7%. That is one in eight of the workforce, or over four million people effectively not working](#). Those most affected are younger people, the self-employed, and those from poorer backgrounds. For example, the rate of worklessness is twice as high for 16-25-year-olds as compared to 26-65-year-olds.

They argue that job guarantees are needed to avert the catastrophe of long-term unemployment.

Others are arguing that the government should institute a universal basic income (UBI) scheme. [Experts told a recent London Assembly committee](#) that “modelling showed child poverty could be reduced by 40 per cent if everyone received between £60 and £75 per week regardless of income.”

FURTHER READING

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JOBS OF TOMORROW

New jobs will require hybrid skills

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[The 2020 Future of Jobs report](#), from the World Economic Forum suggests a number of trends that will define the world of work in the coming years:

- Automation, in tandem with the COVID-19 recession, is creating a ‘double-disruption’ scenario for workers.
- Although the number of jobs destroyed will be surpassed by the number of ‘jobs of tomorrow’ created, in contrast to previous years, job creation is slowing while job destruction accelerates
- Skills gaps continue to be high as in- demand skills across jobs change in the next five years
- The future of work has already arrived for a large majority of the online white-collar workforce
- In the absence of proactive efforts, inequality is likely to be exacerbated by the dual impact of technology and the pandemic recession

The report projects that in the mid-term, job destruction will most likely be offset by job growth in the 'jobs of tomorrow'—the surging demand for workers who can fill green economy jobs, roles at the forefront of the data and AI economy, as well as new roles in engineering, cloud computing and product development.

It is also important to understand that [the constituent activities of many jobs will go or change](#). A significant proportion of the workforce are in jobs that are likely to need redesign and workforce retraining. As almost every job becomes increasingly technology-related, there will be winners and losers. The spread of disciplines and jobs across sectors will also stimulate the hybridisation of skills.

Ensuring the benefits of AI outweigh the negative consequences on the workforce and wider society may require [government intervention and a clear policy framework](#). In the absence of policy intervention, the most likely outcome of automation will be an increase in inequalities of wealth, income and power.

REACH FOR THE DOUGHNUT

A new way to manage the economy, within limits

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Based on a groundbreaking book by British economist Kate Raworth, ‘doughnut economics’ is a model for creating a balanced economy. It aims to avoid a range of environmental overshoots and address a series of social shortfalls - and so create a safe and just operating space for humanity. Effectively the doughnut replaces GDP growth as the aim of economic policy. Economic growth becomes a means to achieve social goals within environmental limits.

Last year, Amsterdam introduced the doughnut as the guiding principle for how the city operates. [Its ambition is to bring all 872,000 residents inside the doughnut](#), ensuring everyone has access to a good quality of life, but without putting more pressure on the planet than is sustainable.

As a small example, Amsterdam has introduced standards for sustainability and circular use of materials for contractors in all city-owned buildings. Anyone wanting to build on Beach Island, for example, will need to provide a “materials passport” for their buildings, so whenever they are taken down, the city can reuse the parts.

Since then Copenhagen, Dunedin, Portland, Austin and the Brussels region have decided to follow Amsterdam’s lead. With endorsements from David Attenborough and the Pope, expect more to follow.

Kate Raworth has established the [Doughnut Economics Action Lab \(DEAL\)](#) for those interested in exploring more.

FURTHER READING

◀ ECONOMY HOME PAGE



THE BITCOIN EFFECT

Will cryptocurrencies fulfil their potential?							
H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU

[Cryptocurrencies](#) such as Bitcoin provide a secure system for storing and exchanging money on the internet. Cryptocurrencies are not regulated or controlled by any bank, government or centralised financial authority, and offers users a range of advantages over traditional banking (anonymity, secure transactions, low transaction fees and no forgery to name a few).

Bitcoin, invented in 2009, was the first cryptocurrency but is not the only one. By the end of 2017, there were over 1,000 cryptocurrencies and [significant volatility](#) the market; largely because of continuing [speculation](#).

A number of leading retail websites [accept cryptocurrencies](#) and they are now beginning to be accepted in the [physical world](#) too. There is even a small but growing network of Bitcoin ATMs in the UK.

Running counterintuitively (perhaps) to the provenance of cryptocurrencies, the Bank of England is currently investigating the possible introduction of a [cryptocurrency linked to sterling](#). A Bank of England issued digital currency would potentially allow British citizens to keep their money in digital form with the central bank itself, dispensing with the need for a retail bank. Big ticket transactions, such as buying a house, could happen in nanoseconds.

The founders of Ethereum, a leading cryptocurrency, fund a research lab (one of two globally) at Edinburgh University that focuses on blockchain technology; other universities, including Oxford and Cambridge, are introducing courses in the technology. A news report in the San Francisco Chronicle on 5 June 2018 indicates that US universities are starting (tentatively) to invest in cryptocurrencies.

WELLBEING AT WORK

# A healthy workplace attracts talent

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The [Work Colleague Of The Future](#) report published in 2019 looks at what office workers might look like in 20 years. The report is accompanied by a life size doll, Emma, who models the future. She is hunched, has varicose veins, eczema, sallow skin, red eyes and a protruding stomach.

Emma may be an exaggerated portrayal but she is a wake-up call for employers and office workers on the long-term effects of sitting at a desk, staring at a screen, and failing to manage stress and find a healthy work-life balance.

A holistic approach to wellbeing at work is vital to ensure workers remain happy, healthy and productive. Although a supportive corporate culture is the most important aspect of wellbeing – a bullying boss is top of the list for causes of ill health in the workplace according to a number of studies – good office design, backed up by a carefully curated selection of amenities, can boost health and happiness in the workplace.

With growing competition to attract talent, firms are increasingly focusing on improving their working environment. [One survey found](#) 93% of tech workers said they would stay longer with a company offering options such as wellness rooms for yoga, meditation and healthy eating options than with those that don't.

[The World Green Building Council](#) has devised seven categories to use in promoting workplace wellness: Air – improving air quality; Water – maintaining hydration; Nourishment – providing healthy eating options; Light – boosting natural light and improving artificial light; Fitness – encouraging physical activity; Comfort – using ergonomically designed furniture and layouts, and Mind – improving mental health.

FURTHER READING

IMPLICATIONS FOR UNITE

- Will the traditional university experience (3 years away from home) survive in the wake of Covid related public debt and unemployment? How will Unite restructure its operations to compensate?
- Will the movement of overseas students be affected by protectionist measures, here and abroad, or will studying be exempt?
- Will the strong and growing economies of the E7 and others represent an opportunity for Unite? How can it maximise exposure in those markets?
- How will Unite respond to the automation of traditional job roles within the business? Would it help the business become more efficient or would it lose the personal service touch?
- Could more flexible working help Unite respond to changing demands from staff?
- How will Unite demonstrate its wider value to society and the communities in which it operates? Will it embrace ESG values and reporting?
- Does Unite have plans to accept Bitcoin and other crypto-currencies? Would block chain help
- Unite is already a good employer. Could it, or should it, do more to support the wellbeing of its staff?

STRATEGIC UNCERTAINTIES

- After the challenging year during Covid, how will Unite respond? Will it aim to drive shareholder value and restore the balance sheet; or seize the opportunity to raise its game in new market segments and lead the sector in terms of social and environmental performance?
- The unprecedented levels of public debt will require correction. It is unclear how political parties will seek to achieve this - through cuts in spending, increases in taxes or a mixed approach. How will Unite position itself for these possible outcomes?
- How fast and how deep the changes in the world of work will be is an unknown. Given the potential for significant disruption, will Unite prepare in time?

START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

# ENVIRONMENTAL

04

Which environmental issues  
will have the biggest effect on  
Unite’s operations?

## LIVING SPACE

Using living walls and roofs  
can help create cleaner,  
greener buildings and  
neighbourhoods.

## WATER, WATER EVERYWHERE

Climate induced water  
shortages are likely to  
affect the UK over the  
next 25 years.

## BUILD BACK GREENER

Can greener regeneration  
and construction be part of  
the post-Covid dividend?

## BIOLOGICAL BUILDINGS

Radical ideas for fusing  
living structures into new  
buildings.

## CLIMATE - FACTS

Global heating will be  
challenging and it is  
continuing to get worse.

## CLIMATE OPINION

Public opinion matters.  
Increasing numbers of  
people believe there should  
be urgent action in  
response to climate  
change.

## NEAR THE PEAK

There are finite resources  
on the planet. Some key  
minerals are reaching their  
peak and will be in short  
supply.

## ELECTRIC DREAMS

Renewables are fast  
overtaking fossil fuel for  
generating energy and  
costs are forecast to be  
lower than alternatives.

## ORIGIN OF THE SPECIES

Loss of biodiversity is seen  
as a crisis on a par with the  
climate crisis. Losing key  
species could have major  
impacts.

## FLEXIBLE DESIGNS

Buildings which can flex  
their use of time offer  
better financial and  
environmental returns.

## BUILDING INNOVATIONS

The leading edge of green  
construction technologies  
could transform future  
buildings.



START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

## ENVIRONMENTAL

04

Which environmental issues  
will have the biggest effect on  
Unite's operations?

2030

27 UK water zones  
will be under water  
stress by 2030

2021

48% of people in UK  
want government to  
treat climate as an  
emergency, like  
Covid-19.

2050

London could feel  
as hot as Barcelona  
by 2050

2030

Energy from solar  
and offshore wind  
will be cheaper  
than gas by 2030.

2040

Demand for oil will  
fall by 50% over  
next twenty years.

2070

It takes 50 years  
to offset the  
embedded carbon  
in a building



LIVING SPACE

Green roofs and urban growing space improves wellbeing

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Evolving styles of architecture and urban planning mean that many buildings are adding green spaces that seamlessly integrate with the environment around them. [An increasing number of them now have living walls or green roofs](#) – for example the city of Linz in Austria requires green roofs on all new residential and commercial buildings with rooftops larger than 100 or 500 square meters, respectively. Toronto also passed by-laws mandating rooftop vegetation; with San Fransisco becoming the first US city to follow suit.

Green roofs have a number of benefits, such as reducing run off and so mitigating the effects of flooding; they typically save save between 15% and 45% of energy usage, and they can minimise urban heating when several buildings have them in proximity. [A recent report on living walls and roofs in London](#) between 2008 an 2018 has shown a range of other benefits:

-  increased biodiversity
-  improved air quality
-  health and wellbeing
-  noise reduction
-  potential for carbon sequestration

Creating green space in city centres has become a key aspect of city development. In European cities urban orchards are becoming popular. One example is in the German city of Andernach, [known as the Edible City for growing its own vegetables](#). It's one of the oldest cities in Germany and over the last few years it has converted its public spaces into authentic urban orchards which are tended by its inhabitants. Another example is Madrid, a city which already has more than 30 urban orchards.

There are wider benefits for the population of ‘green’ cities - they are healthier as well. [A study from the University of Exeter Medical School’s European Centre for Environment and Human Health](#), says: “We’ve found that living in an urban area with relatively high levels of green space can have a significantly positive impact on wellbeing.

WATER, WATER EVERYWHERE

Water shortages coming the in UK over next 25 years

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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With changing climate and warming overall, [the pressure on fresh water across the globe continues to grow](#). Almost 2 billion people rely on glacial meltwater to feed their water supplies - yet almost all major mountain ranges are seeing rapid decrease in glacier coverage. Upward demand from increased population, intensive agriculture and industrial uses have seen groundwater tables dramatically lowered and aquifers drained.

IBM estimate that more than [half of the world’s population will be living in water-stressed areas](#) within 10 years. A range of new technologies are being tested and brought into production to allow desalinisation in more remote areas, at lower cost and using only solar energy. From a [graphene sieve](#) to [metal organic frameworks](#), they could transform the availability of fresh water across the globe.

Parts of the UK are now regularly under water stress and new ways to store and distribute water and reduce demand are being planned. By 2030, [27 of the water zones are forecast to be in supply / demand deficits](#). In particular, London and the North West are thought to be vulnerable to supply shortages. By the 2050s, climate change will further impact fresh water supplies and there could be a 10% reduction in water available for public use. The Environment Agency warned in 2019 that [there will be shortages in England within 25 years](#). Yet few people are aware of the situation, [according to a 2020 survey](#). It found that 10% of those questioned thought thought it was a key environmental issue.

In a thirsty world, technologies that can extract and recycle water should become increasingly valuable, and advanced water management also will become more important. The returns on water-conservation efforts become more attractive when companies consider the full economic burden of waste.

FURTHER READING

BUILD BACK GREENER

The recovery from Covid should be greener

H1

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As the urgency, and potential catastrophe, of global warming becomes increasingly understood, there are pressures from all sides to ensure that the recovery from Covid is a green one.

Some governments have linked Covid bailouts to more [stringent green goals](#).

The world is witnessing the unusual situation of companies urging faster action from governments in shaping the market. In the States, [330 businesses worth a combined \\$11.5 trillion](#) have urged Congress to include the climate in any recovery plan.

In 2020, the Task-force on Climate related Financial Disclosures (TCFD) had signed up over 1,000 companies globally. And in November, Rishi Sunak, has announced the [intention to make Task Force on Climate-related Financial Disclosures \(TCFD\) aligned disclosures fully mandatory](#) across the economy by 2025.

Even [the OECD has recognised the economic opportunity alongside the environmental necessities](#). They advocate that cleaner air quality, healthier water, effective waste management, and enhanced biodiversity protection not only reduce the vulnerability of communities to pandemics and improve resilience, but have the potential to boost economic activity, generate income, create jobs, and reduce inequalities.

They describe how a green recovery is a win-win strategy and how governments have a once-in-a-lifetime opportunity to ensure a sustainable recovery by:

- 🌿 Step up actions for a green and inclusive recovery.
- 🌿 Speed the transition to a low-emissions economy.
- 🌿 Track progress through pertinent, comparable and timely data.
- 🌿 Leverage finance to invest in the green recovery.

BIOLOGICAL BUILDINGS

Buildings may become closer to nature than you can imagine.

H3

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Maybe buildings of the future don't need to be [AI filled structures](#) face mapping our every move. Perhaps they need to be self-sustainable and responsive structures infused with a bit of [biology](#).

Concern over the embodied energy and carbon as well as resource depletion, is beginning to impact on the design and construction of new buildings. Traditional design, manufacturing, and construction processes demand huge amounts of energy and resources, but the resulting buildings give nothing back. To make the future more sustainable, [some architects](#) are experimenting with dynamic structures that give as much as they take. They aim to build *with* nature, not against it.

The [Fab Tree Hab project](#) embodies many of the advantages of living architecture. Unlike contemporary buildings, living structures absorb greenhouse gases instead of emitting them. They can self-assemble as well as self-repair. Need an extra room? Grow one.

More generally, building biology is about creating healthy, beautiful, and sustainable buildings in ecologically sound and socially connected communities. In the selection of materials and the design of living environments, ecological, economic, and social aspects are considered. [These principles should offer](#):

- 🌿 Healthy Indoor Air
- 🌿 Thermal and Acoustic Comfort
- 🌿 Human-based Design
- 🌿 Sustainable Environmental Performance
- 🌿 Socially Connected and Ecological Sound Communities

FURTHER READING

◀ ENVIRONMENT HOME PAGE



## CLIMATE FACTS

## Climate change is likely to be worse that predicted

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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It is not an exaggeration to say that the next 10 years will define our future on this planet.

The IPCC has warned that exceeding 1.5C warming will push us into "a highly uncertain world" - adding that "the current global commitments are not sufficient to prevent temperature rise above 2C, let alone 1.5C. A 2C increase would result in the average UK temperature during summer's hottest month increasing by about six degrees to 27C.

[London could feel as hot as Barcelona by 2050](#), with Edinburgh's climate more like Paris, Leeds feeling like Melbourne and Cardiff like Montevideo. London could suffer from the type of extreme drought that hit Barcelona in 2008 - when it was forced to import drinking water from France at a cost of £20 million

[Annual global temperature is likely to be at least 1°C warmer](#) than preindustrial levels (defined as the 1850-1900 average) in each of the coming 5 years to 2025 and is very likely to be within the range 0.91 – 1.59°C.

The critical issue is whether, and how soon, we reach some of the major climate ‘tipping points’. These include:

-  the melting of polar icecaps and glaciers. These act as reflectors, bouncing some of the sun’s heat back out to space. When melted, sea ice will become dark ocean and absorb heat instead. Melting ice could be responsible for several metres increase in sea levels over the next century. [Arctic sea ice extent averaged for December 2020 was the third lowest in the satellite record](#)
-  the melting of permafrost. This will result in the release of huge amounts of methane (an even more dangerous greenhouse gas than carbon dioxide) - and accelerate planetary warming. Scientists say they have found [evidence that frozen methane deposits in the Arctic Ocean have started to be released](#) over a large area of the continental slope off the East Siberian coast.
-  the loss of forest cover. This occurs because of over-exploitation by humans and by natural change and fire. As temperatures increase, rain forest cover in Africa, Asia and South America will dry out and will become more prone to major fires.

## CLIMATE OPINIONS

## There is overwhelming support for more action

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[The biggest ever global survey on climate change](#), in December 2020, has found that almost two-thirds of the 1.2 million people asked think it is a global emergency. Italy and the UK topped the poll with 81% believing that there is a climate emergency.

The government should be more radical and put in place serious policies to fight the climate crisis with the same urgency as it has to coronavirus, voters believe.

A new survey by pollsters Opinium found [48 per cent of the public agree that the government should respond "with the same urgency to climate change as it has with Covid-19"](#), with just 28 per cent saying it shouldn’t.

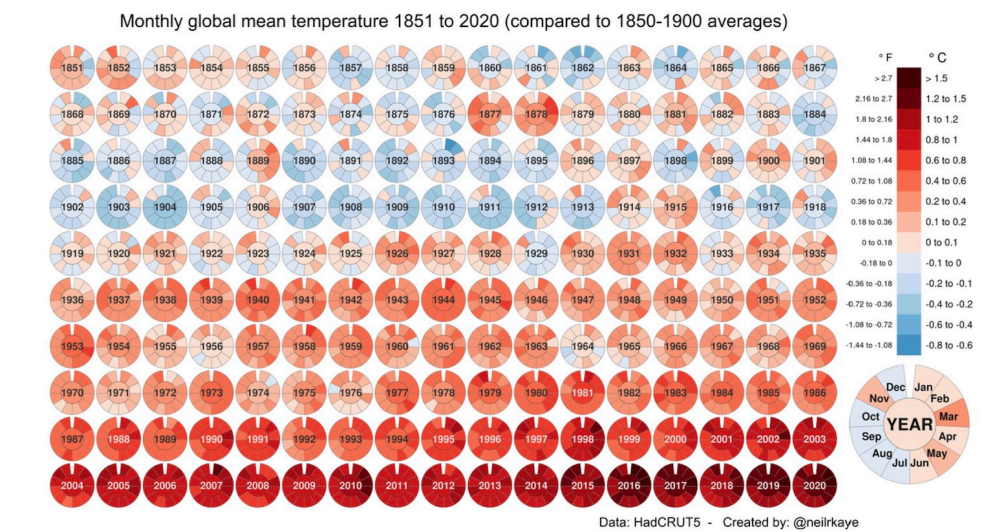
Young people and the better educated are more likely to believe in climate change and be concerned about the consequences, [according to the 35th British Social Attitude survey](#).

As the government unveils their ambitious recovery plans in light of the coronavirus crisis, new data by Ipsos MORI on behalf of the Conservative Environment Network (CEN), shows [more than half of Brits want to see these plans involving measures that tackle pollution and climate change](#). The survey reveals that 69% of Brits would view a failure to tackle pollution and climate change in a post-coronavirus recovery plan as ‘a sign that the government has the wrong priorities.’

The concerns can be seen in the significant increase in public protest. From the Greta Thunberg inspired ‘[school strikes for the climate](#)’ to the non-violent direct action of Extinction Rebellion, these are bringing the issue to the public’s and politicians’ attention. That pressure and activism is increasingly directed at private companies - including banks, investors, staff [and their charitable sponsorships](#). Being involved in the fossil fuel industry or other environmentally damaging activities is becoming increasingly uncomfortable in the hot house of public opinion.

Greta continues to press the the case for urgent action at the highest level and gets great traction with the media. [Her latest speech to the 2021 World Economic Forum](#) is scathing of political and corporate responses to the crisis.

## FURTHER READING



NEAR THE PEAK

Oil, some minerals and rear earths are depleting fast

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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There are many substances that are being used up faster than they can be replenished naturally. There is clearly a limit as to how long such a situation can continue. The planet has finite resources and a growing economy and expanding population are increasing demand.

Meeting the needs of [more than 7.6 billion people](#) (and more than 2 billion more by 2050) has transformed land use and generated unprecedented levels of pollution, affecting biodiversity, forests, wetlands, water bodies, soils and air quality. A measure of the accelerating use of resources is calculated in [Earth Overshoot Day](#) - the date when we use our resource budget for the year, In 2020 it was August 22nd.

[Minerals](#), [fossil fuels](#), many rare earth metals, [fertile topsoil](#) and fresh water are all vulnerable to over-exploitation. While some substitution will occur and technologies will be developed to lessen these impacts, new ways to manage declining resources are urgently needed.

The 2020 edition of BP [annual energy outlook](#) reveals – albeit indirectly – that global oil demand will not regain the levels seen last year. It adds that demand could soon fall rapidly in the face of stronger climate action – by at least 10% this decade and by as much as 50% over the next 20 years.

Rare earth minerals are naturally occurring resources, which cannot be recreated or replaced. There are five very [rare earth minerals used in technology we take for granted](#) today. They are tantalum, silver, lithium, gallium and indium. There is a growing industry in recycling these metals from old equipment - which preserves existing deposits and reduces the environmental impact of extraction.

ELECTRIC DREAMS

Renewable energy has come of age

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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In 2020, 90% of the new installed power capacity worldwide was renewables. Shares in solar PV companies across the world have doubled in value in one year. 2021 is set to be a record year for installation of solar and wind in India, China, the EU, Middle East and Americas. Sustained policy support and reduction in technology costs is driving continued optimism in the industry - [with forecasts for rapid growth in solar and offshore wind through to 2025](#).

While renewables are predicted to overtake coal and gas in the production of electricity, fossil fuels remain dominant for transport and other fuels.

In the UK, [new government estimates](#) show that wind and large-scale solar plants will have significantly lower costs than gas over the next two decades - with the levelled cost of solar as low as £28 per MWh.

With production and installation costs falling rapidly, solar arrays on commercial buildings will provide electricity at about 5.5p per KWh, averaged over the 25 year life of the array. Investing in renewables can provide financial returns, reduce a business’ carbon footprint and demonstrate climate commitments.

FURTHER READING



ORIGIN OF THE SPECIES

Loss of species and habitats is a looming threat

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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We are approaching critical tipping points for nature as well as climate. [Over half of the world's GDP is moderately or highly dependent on nature](#) and, in 2021, the [WEF Global Risk Report](#) has extreme weather, climate action failure, human environmental damage and biodiversity loss as four of the top five most likely global risks - from a survey of over 800 business, civic and political leaders. It would seem that business-as-usual is no longer good for business.

The HM Treasury/Dasgupta report on the Economics of Biodiversity was released in February 2021 and makes sobering reading. [Biodiversity is declining faster than at any time in human history](#). Current extinction rates, for example, are around 100 to 1,000 times higher than the baseline rate, and they are increasing. This is fuelling extreme risk and uncertainty for our economies and well-being.

The safeguarding of natural ecosystems is crucial if we are to meet both biodiversity and climate goals. [Stopping deforestation and restoring forests, for example, is one of the best options available to halt climate change](#); it also brings vast benefits for biodiversity. Such win-win scenarios are central to nature-based solutions and climate solutions.

[A 2019 intergovernmental report](#) found that nature is declining globally at rates unprecedented in human history – and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely. The Report finds that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history. These trends are likely to continue until 2050.

The 2020 Living Planet report points to a [68% fall in wildlife populations since 1970](#). In the report, Sir David Attenborough suggests that we need: “systemic shifts in how we produce food, create energy, manage our oceans and use materials. But above all it will require a change in perspective. A change from viewing nature as something that’s optional or ‘nice to have’ to the single greatest ally we have in restoring balance to our world.”

FLEXIBLE DESIGNS

Flexible buildings are the key to carbon savings

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The most significant factor in a building’s carbon footprint is the embodied energy and carbon used in the materials and the construction process. Estimates from the Carbon Compass report suggest that it takes at least 50 years to offset the embodied carbon with carbon savings from the running of the building.

The logic would then suggest that making any building last as long as possible is key to real carbon savings and achieving net zero over the lifetime of the structure. Given that no-one can predict what the need will be in 30 years or more, it is important to design new buildings with a range of alternative uses in future. In that way, apartments can be re-purposed as workspaces, or shops, or hotels - and back again.

This notion of adaptability over the lifetime of a building is a focus of Ellen McArthur’s Circular Economy Foundation. [New concepts and techniques, such as modular units and moveable interior walls, are bringing greater flexibility and resource-efficiency into residential and commercial buildings](#). These methods support the efficient and effective use of a building during its lifetime, such as repurposing a commercial building into housing, using modularity to downsize a home or an office, or supporting sharing and mixed functionality.

One of [the largest benefit of flexible architecture is the ability to keep the built environment relevant and useful](#) as time goes on. Occupant needs can change drastically even in the span of just a decade, and this typically results in the need for buildings to undergo renovations or other updates. Flexible architecture proposes a solution to this. An example is the [Serene House HCMC](#), a mixed-use development in Vietnam. It’s a prefabricated structure, and it features ample flexibility for occupants. Most of the furnishings are movable, and the design blends the inside and outside to encourage movement and a wide range of uses. In fact, it’s so flexible that it can be disassembled if needed.

FURTHER READING



BUILDING INNOVATIONS

Green materials can transform the construction industry

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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**Transparent Wood.** Invented by Swedish researchers, wood can now be treated and compressed to become a transparent material. [Transparent wood is created by compressing strips of wood veneer in a process that is similar to pulping.](#) This removes the lignin and replaces it with the polymer, making the wood 85% transparent.

**Buildings that breathe.** EcoLogic Studio has invented an algae-based ‘cladding’ system, called [PhotoSynthetica](#). Large panels are attached to new, or old, buildings which ‘suck in’ unfiltered and polluted air from the street that then rises up through the panels. The algae capture the CO2 and other pollutants and releases photosynthesized oxygen back into the street or the building interior. The company claims that two square metres of PhotoSynthetica panels can absorb as much CO2 as a mature tree.

**Super-hydrophobic Cement.** Scientists in Mexico have discovered that changing the microstructure of cement can make it absorb and reflect light, creating [super-hydrophobic cement, also known as luminescent cement](#). The cement is able to absorb and reflect light, offering an alternative to street lighting as the ground would be lit up using this luminescent cement.

**Breathe Bricks.** Acting as a secondary layer of insulation, [these pollution-absorbing bricks](#) can remove 30% of fine particles and 100% of coarse particles, making air within office spaces and public buildings healthier to breathe. This is particularly useful as a way to improve air within buildings in areas with poor air quality. This is a cost-effective way to reduce air pollution, as it requires no further maintenance once installed.

**Super Wood.** Scientists have now discovered a way to add strength to wood by boiling it in a solution of sodium hydroxide (NaOH) and sodium sulfite (Na2SO3) before it is compressed. [The compressed wood is far stronger and more durable than wood in its natural state](#); therefore, it can be used in a greater range of construction projects. The wood is so strong it can stop bullets, but is far lighter than comparable materials of the same strength.

BUILDING INNOVATIONS

Technologies that will change our buildings

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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**Generative design** maximises sustainability in construction through technology. [Combining algorithms with AI technology](#), designers can input their goals into the software along with parameters such as materials, manufacturing methods and cost constraints, to be presented with thousands of potential solutions. It also allows for thorough testing before construction, reducing material wastage. Whether it provides better solutions than a human designer remains to be seen.

**Pee power** converts urine into electricity. Urine passes through a series of Microbial Fuel Cells (MFCs). The microbes feed on the organic materials found in urine, releasing electrons and generating electricity. The [PEE POWER® system](#) was developed at the University of the West of England (UWE Bristol) and has s been used to provide some of the power at Glastonbury Festival for the last four years.

**Additive Manufacturing** has gained a lot of publicity for) projects such as the [3D printed house that can be built in one day at low cost](#) - which start up business ICON wants to use to print affordable houses for families living in slums across the world – and [Arup’s collaboration with CLS Architects](#) in Europe. Future developments mean that houses will likely move from concrete to advanced hybrid materials.

**Buildings as Materials Banks.** [By repositioning buildings within a cycle of value](#), BAMB aims to reduce waste and virgin materials. Using high quality, reusable materials with easy-to-disassemble components suitable for reuse means they can be dismantled and returned to manufacturers at the end of the building’s life. “Leasing” these materials may become the future of sustainable construction.

Solar glass technology makes use of [a photovoltaic coating that can offer several degrees of transparency and that transforms solar power into electricity](#). [New Energy Technologies](#) (USA), which has developed an almost invisible photovoltaic liquid that can be spread over any transparent surface. Together with photovoltaic graphene paint, photovoltaic glass might very well prove to be a game changer in the generation of energy.

FURTHER READING

◀ ENVIRONMENT HOME PAGE

ELECTRIC DREAMS

Renewable energy has come of age

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FURTHER READING

IMPLICATIONS FOR UNITE

- Given the fierce debates about the impact of PBSA in many cities, would a version of University Civic Agreements help Unite demonstrate social, economic and environmental value to local communities?
- Overwhelmingly, students are concerned about environmental issues. Will Unite attract more students by improving its environmental credentials? Would greener buildings be an additional factor in attracting students, even if there is an initial cost?
- With a large physical estate, Unite is a large consumer of energy. It could become an energy producer by partnering with providers to generate renewables off site and guarantee energy, carbon savings and price savings over 20+ years.
- Climate change is a true existential threat and will demand increasingly urgent and scalable responses from all parts of society. Has Unite considered whether it needs to rethink its business model in the future?
- What would be Unite’s risk profile in responding to bleeding edge construction technologies? Is it a market maker or market taker? Can it use one, or more, of its properties as a test bed for new green tech?
- Unite will have to consider reducing water usage, just as it does with energy. This will include water used in the construction as well as operation of its properties.

STRATEGIC UNCERTAINTIES

- Governments around the world are likely to accelerate any plans to decarbonise the economy and society, though it is hard to predict how fast those changes will occur. If the direction is clear, will Unite choose to shift early - building expertise as it goes?
- How far will long people’s choices of accommodation be guided by environmental concerns in the coming years? Can Unite stay ahead of that curve?



START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

POLITICAL /  
LEGAL

05

How will political and legal  
changes affect the operating  
environment?

UK NATIONAL  
DATA STRATEGY

How government can  
boost better use of data by  
businesses, government,  
civil society and individuals

THE ENERGY  
WHITE PAPER

The White Paper outlines  
what the UK will do to  
achieve its net-zero targets  
on carbon emissions by  
2050

TOP COMPLIANCE  
CHALLENGES

Government will work with  
industry to evaluate  
hydrogen as an option for  
heating homes and  
workplaces

UK NATIONAL DATA STRATEGY

Improving public services and the economy

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The UK Government launched its [National Data Strategy](#) in September 2020 and published the detailed plan in December 2020. The strategy looks at how government can leverage existing UK strengths to boost the better use of data across businesses, government, civil society and individuals. It sets out four pillars of activity and five priorities areas - or missions - for action.

The pillars reflect interconnected issues that currently prevent the best use of data in the UK. They are

- Ensuring data foundations are fit for purpose
- Developing data skills for a dat driven economy and data rich lives
- Ensuring data is appropriately accessible
- Driving safe and trusted use of data

The five missions are

- Unlocking the value of data across the economy
- Securing a pro-growth and trusted data regime
- Transforming government’s use of data to drive efficiency and improve public services
- Ensuring the security and resilience of the infrastructure on which data relies

The Cabinet Office has established [a new central digital and data office](#) (CDDO) to lead delivery. Paul Willmott, founder of McKinsey Digital at McKinsey & Co, is to be chairman. Tom Read, former chief technology officer at the Cabinet Office, is the chief executive. CDDO will - alongside the [Civil Service Digital, Data and Technology profession](#) (CSDDT) - be responsible for delivering the strategy and ensuring the government can better leverage data and emerging technologies to improve public services and the economy

THE ENERGY WHITE PAPER

Powering the UK’s net zero future

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The [Government’s Energy White Paper](#), released in December 2020, outlines what the UK will do to achieve its net-zero targets on carbon emissions by 2050. The key areas are

- Consumers: there will be increased competition in the energy retail market and opportunities to save n energy by upgrading energy performance of homes and using smart technology.
- Power: the government will accelerate deployment of clean electricity generation through £1 billion investment in the UK’s energy innovation programme
- Energy System: information about supply and demand will be used to drive greater efficiency and lower costs to consumers and promote innovation and competition in networks and in national and local energy markets. Electricity networks will be able to integrate increasing renewable generation and more electric vehicles (EVs), while controlling system costs.
- Buildings: there will be a drive to improve energy performance in existing and new buildings to reduce consumption and help keep bills affordable. This will include the transformation of heating for homes and workplaces from oil and gas to clean energy sources. The switch to clean energy will support up to 50,000 jobs across the UK by 2030.
- Industrial Energy: policies will focus on creating a sustainable future for UK manufacturing industry through improved energy efficiency and the adoption of clean energy technologies. The government will pursue its ambition to make the UK a world leader in the carbon capture, utilisation and storage (CCUS) and clean hydrogen, supporting up to 60,000 jobs by 2030. A new UK Emissions Trading Scheme - the world’s first net zero emissions trading scheme - will underpin the decarbonisation of energy in the UK.
- Oil & Gas: government will work with the sector to transform the UK Continental Shelf to be a net zero basin by 2050 and to provide opportunities for oil and gas companies to repurpose their operations to abatement technologies such as CCUS or clean energy production such as renewables and hydrogen.

FURTHER READING

PLANNING AHEAD?

Possible policy changes to come

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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In July 2020, Housing Minister Christopher Pincher said that the Government wanted to see “better planning for nature”. Also in July 2020, in a speech on environmental recovery, the Environment Secretary, George Eustice, announced a consultation on changing the approach to environmental assessment and mitigation within the planning system, to “front-load ecological considerations in the planning development process” and “protect more of what is precious”.

Media coverage of the speech suggested that some wildlife groups were offering a cautious welcome, but green groups are concerned the reforms could lead to weaker protections for rare habitats and species. Dr Jeremy Biggs, co-founder and director of the Freshwater Habitats Trust, said “If the agenda is less box ticking and better science-based conservation action, then that is welcome. But if we hastily ditch protection of threatened species and habitats in the name of planning reform, that will make it difficult to stop the decline of nature, never mind reversing it.”

The Government launched a consultation on revised permitted development rights on 3 December 2020. Main points of the consultation include:

- 🌿 A new PDR to allow change of use from the new use class E (commercial, business and service) to C3 residential.
- 🌿 An amended PDR for the extension of schools, colleagues, universities and hospitals, to support the faster delivery of schools and hospitals and other public infrastructure improvements.
- 🌿 A similar right for prisons and defence sites, which would allow prisons (but not other residential facilities such as immigration removal centres) to expand their facilities.
- 🌿 Faster decisions on applications for planning permission: for relevant planning applications, the statutory period for determination would be reduced from 13 weeks (or 16 weeks in the case of development requiring an Environmental Impact Assessment) to 10 weeks.



IMPLICATIONS FOR UNITE

STRATEGIC UNCERTAINTIES

HIGHER  
EDUCATION

06

What are the biggest  
disruptors for the HE sector  
in the UK?

RULE BRITANNIA

The UK is likely to remain  
one of the top international  
destinations for graduate  
education

HONG KONG ON  
THE RISE

Hong Kong now attracts  
more mainland China  
students that the UK does

OUT OF AFRICA

The number of African  
students enrolled in  
Chinese universities has  
increased by 4,549% in a  
15 year period

BILINGUAL  
EDUCATION

Taiwan's education ministry  
is driving expansion of  
degrees and postgraduate  
courses taught in English

CLIMBING UP THE  
RANKINGS

China has overtaken the  
UK and there is no second  
behind the US on the list of  
most highly cited scholars

WHERE ARE ALL  
THE JOBS?

China's economic recovery  
has been mainly fuelled by  
blue-collar sectors.  
Graduates are an  
oversupply

TOO MANY  
GRADUATES

42% of the core skills  
required to perform existing  
jobs will have changed by  
2022

ALTERNATIVE  
CREDENTIALS

The key to making higher  
education reach non-  
traditional groups who need  
to upskill or reskill

WILL COVID  
DISRUPT HE?

Is the HE sector poised on  
the brink of transformation?  
Or will universities revert to  
business as usual?

NAVIGATING  
CHANGE

Universities need to think  
carefully about how to  
adapt to a digital learning  
environment

LEADING  
PURPOSEFULLY

The digital workforce  
expect digital  
transformation to better  
reflect their concerns and  
values, not just boost  
market opportunities

FROM SURVIVING  
TO THRIVING

Universities need to be  
ready for a more risk-  
averse, socially conscious  
and activist student body

STUDENTS AS  
CONSUMERS

Students will demand  
money back - and  
compensation - if they  
receive it on satisfactory  
service

TACKLING RACIAL  
HARASSMENT

Guidance from Universities  
UK on how to tackle racial  
harassment in higher  
education

WHO TAKES THE  
HIT?

Pressure mounts and  
universities in England to  
offer a rent rebate is an  
academic safety nets for  
students

HIGHER  
EDUCATION

06

What are the biggest  
disruptors for the HE sector  
in the UK?

THE COST OF THE  
PANDEMIC

The pandemic could cost  
the Westminster  
government up to £12  
billion extra in higher  
education funding for  
England

HOW RESILIENT  
ARE YOU?

The covered resilience  
ranking scores economies  
on 10 key metrics. Perhaps  
it's time to do the same for  
universities

MERGERS...?

A strategic restructuring of  
further and higher  
education?

CLOSURES...?

Some existing universities  
should be closedown and  
new ones be established to  
save the HE sector

MARKETING  
ACCOMMODATION

The strategic importance of  
accommodation in the  
marketing of study  
destinations is underplayed

END OF SMALL  
CAMPUSES?

Unity College in Maine has  
opened up debate about  
whether small institutions  
really need to have flagship  
campuses to survive

KNOW HOW TO  
CREATE VALUE

Corvid could lead to the  
erosion of institutional  
affiliations and a rise in  
freelance academic learning  
designers

LEARNING  
ANALYTICS

The era of iTeacher hasn't  
happened yet, but we are  
definitely getting closer

HE'S ROLE IN  
RECOVERY

The HE sector could play a  
role in recovery post Covid.



## RULE BRITANNIA

## US and UK to remain the top international destinations

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The Graduate Management Admission Council (GMAC) – a global association of graduate business schools – has [surveyed students considering an international programme in 2021](#) to determine how the pandemic has changed their plans.

- 71% say it has made no difference.
- 17% (1 in 6) are considering a business school closer to home.
- 14% (1 in 7) are considering online learning.

GMAC suggest these findings indicate a potential rise in regional mobility and the adoption of online – or perhaps blended - learning models for a segment of prospective international students.

In its efforts to continue to attract global talent, the [UK government is creating pathways for education](#) and work with a [points-based immigration system](#). The new system will treat EU and non-EU citizens equally. From the summer of 2021, all international students who have completed a degree programme will be permitted to remain in the UK for up to two years (going up to three years for PhD degree students) after successfully completing their studies, through the new Graduate Route. This allows the students to gain meaningful work experience in the country even as they decide their future career move.

The UK government has also simplified the visa process for international students. Since October 2020, the Student Route, which falls under the UK's new points-based immigration system, is applicable, improving the previous Tier 4 route and making a more streamlined experience for sponsoring institutions and students.

Covid-19 may be decelerating student mobility overall, but GMAC's Director suggests that these developments – coupled with the political changes in the US – mean that the US and UK are likely to remain the top two international destinations. And do well.

## HONG KONG ON THE RISE

## ...or do undergraduates tell a different story?

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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A [2020 study into student perspectives on the impact of Covid-19 on student mobility](#) examined the expectations of Mainland China and Hong Kong students for studying abroad after the pandemic.

Among the 2,739 respondents, 84 percent showed no interest in studying abroad after the pandemic. The majority of respondents in the study were 18 to 25-year-old first degree seekers.

The top five most popular study destinations are the US (17.1%), Hong Kong (13.4%), the UK (12.2 %), Japan (10.8 %), and Taiwan (10.8 %).

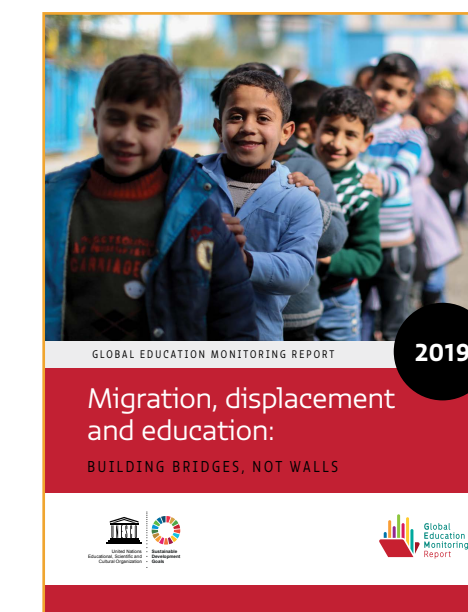
Hong Kong used to be the eighth most popular destination but is now starting to attract more Mainland China students than the UK does. Taiwan, coming up fast, has never been any top ten study destinations for Mainland China students before.

The report concludes that, while the pandemic has significantly decreased international student mobility overall, it is also shifting the direction of flow. East Asian countries and regions are facing more opportunities in the increasingly competitive higher education sector for international students.

It also notes that the trend means UK universities could face a £2.5 billion loss in tuition income. [The recent report from the Institute for Fiscal Studies](#) suggests lost income from reduced international student numbers could be higher at £4.3bn (a 10% drop).

The article also suggests that the current global health crisis could intensify social and economic inequalities across different higher education systems when some countries fail to maintain the scale of international learning because of different speeds of economic recovery post Covid.

## FURTHER READING



OUT OF AFRICA

Africa students head to China in record numbers

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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In 2003, there were [1,793 African students enrolled in Chinese universities](#). The number rose to 81,562 students in 2018, increasing by 4,549% in a 15-year period, or by 303% annually.

This had been the fastest international student growth rate among all the world regions, according to Esther Benjamin, the chief executive officer of World Education Services and a former chief executive officer of Monash South Africa.

As of two years ago, 16.5% of about half a million international students in China were from Africa. Ghana, Nigeria, Tanzania, Zambia and Zimbabwe were the top five African countries with the highest number of students in China. Currently, China is second only to France as the most popular destination for African students seeking higher education outside the continent.

Academics suggest the main rationale underpinning China’s recruitment of African international students is to build a soft power strategy in its engagement with African countries.

The pandemic may be putting the brakes on, however. [Actions targeting Africans and African Americans in Guangzhou](#), a southern Chinese city that is home to more than a dozen universities - evictions, forced home quarantine, being barred from buying essentials from local businesses – were all done in the name of disease control but were reported unfavourably on international news.

By the end of 2020, hundreds of thousands of foreign students from developing countries who left China in the first wave of the pandemic in March were [still unclear about when they would be allowed to return](#). This lack of communication from China has proven disastrous and, for the time being, has weakened China’s soft power significantly.

BILINGUAL EDUCATION

Degrees taught in English

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Taiwan’s education ministry is pushing forward with its goal of bilingual English-Chinese education in schools and more university degrees and postgraduate courses taught in English as part of an effort to attract foreign students to plug a demographic gap, improve the country’s competitiveness and to compete head-on with universities in Hong Kong and Singapore.

Taiwan’s goal is to become a bilingual nation, including at university level and attract more foreign students, particularly from Asian.

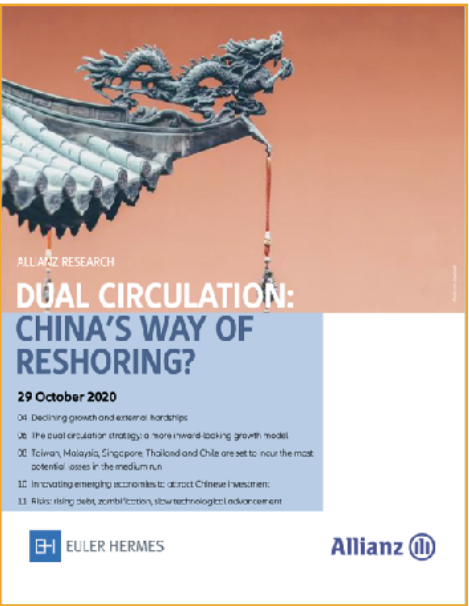
The ministry held meetings in late 2020 with the heads of top universities to select universities to move towards the goal of half of all undergraduate courses, 70% of masters courses and 90% of doctoral degree courses to be taught in English within a few years. This compares to fewer than a third of masters and doctoral courses taught in English at present.

The meetings come as the ministry last month earmarked TW\$3.61 billion (US\$127 million) over the next two years for bilingual education in all school grades before tertiary education.

The money will be for classes taught in English, subsidies for some subjects to be taught in both English and Mandarin Chinese, increased support for disadvantaged students and students in rural areas where there is already a shortage of teachers, and increasing teachers’ English fluency by allocating funds for short-term study abroad programmes, Deputy Education Minister Tsai Ching-Hwa told local media on 4 October.

English-proficient high schoolers would then feed through to the universities.

FURTHER READING





## CLIMBING UP THE RANKINGS

## China overtakes the UK

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[China dominates the ranking of universities in the world's emerging economies](#). Not only are seven of the 10 best emerging-market universities in China, but 81 of its institutions feature in the Times Higher Education's (THE) list for 2020. That's more than any other country. With 56 universities in the ranking, India is the second-most-represented country out of the 47 that appear in the list.

But this is only part of the story.

Tsinghua University recently became the first Chinese institution to enter the top 20 of the [Times Higher Education World University Rankings](#). Fudan University and Zhejiang University also broke into the top 100, taking the number of Chinese institutions in that bracket to six – compared with only three 10 years earlier.

In a single generation, China's university system has been transformed into one whose most prominent members are producing world-class research and moving into the upper echelons of global rankings.

China recently overtook the UK on an annual list of nations with [the most highly cited scholars](#), published by Clarivate Analytics, putting it second behind the US. And China's involvement in what Clarivate deems cutting-edge areas of science is now similar in scale to that of the US, particularly in physical science.

These achievements are the result of 20 years of reform, implemented via highly centralised government control. Top universities have been pushed to adopt corporate management styles ruthlessly focused on meeting key performance indicators such as research citation volumes and ranking positions. In return, they have been enrolled in a series of lucrative excellence initiatives that have seen their budgets mushroom.

## WHERE ARE ALL THE JOBS?

## China's narrowing opportunities

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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In 1997, China had fewer than 3.5 million undergraduate and graduate students. In 2019, there were more than 33 million, not counting online schools and adult higher education institutions

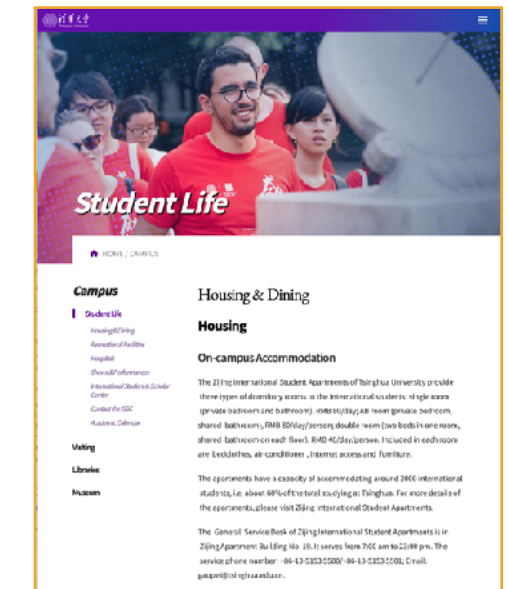
China's economy has largely rebounded from the coronavirus pandemic, with data released in January 2021 showing it has become perhaps the only major economy [to have grown last year](#). But the recovery has been mostly fuelled by [blue-collar sectors](#) such as manufacturing, on which the Chinese economy still relies heavily. The one area of the economy that remains sorely lacking? The supply of desirable, well-paying jobs for the country's rapidly ballooning count of university graduates.

China's Ministry of Education announced at the height of the outbreak that it would order universities to [expand the number of master's candidates](#) by 189,000, a nearly 25 percent increase, to ease unemployment. Undergraduate slots would also increase by more than 300,000.

Even before the pandemic, the country's graduates complained that there were not enough suitable jobs. Now, many Chinese have worried that the expansion of graduate slots will increase already fierce competition for jobs, dilute the value of advanced degrees or postpone an unemployment crisis. And so, 3.77 million new graduates took the national entrance exam for graduate school in December 2020 - an 11 percent increase from the year before and more than double the number from 2016.

IT is, of course, only a delaying tactic – and one that is unlikely to have much success. Chu Chaohui, a researcher at China's National Institute of Education Sciences, [told the state-owned Global Times tabloid](#) that graduates should lower their sights. If they did so, he said, they would find jobs in sectors such as food or parcel delivery.

## FURTHER READING





TOO MANY GRADUATES

We need a global reskilling revolution

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Ten years ago [Peter Turchin](#), a scientist at the University of Connecticut, made a startling prediction in Nature. “The next decade is likely to be a period of growing instability in the United States and western Europe,” he asserted, pointing in part to the “overproduction of young graduates with advanced degrees”.

Fast forward to today and that elite overproduction perhaps explains the malaise gripping the rich world of late. It has become extraordinarily difficult for a young person to achieve elite status, even if she works hard and goes to the best university. House prices are so high that only inheritors stand a chance of emulating the living conditions of their parents. The power of a few “superstar” firms means that there are few genuinely prestigious jobs around. Now, Peter Turchin reckons that each year America produces some 25,000 “surplus” lawyers. [Over 30% of British graduates are “overeducated” relative to their jobs.](#)

The surplus is likely to increase as jobs are transformed by the fourth industrial revolution – transformations that mean, the world [need to reskill more than 1 billion people](#) - almost 1/3 of the global workforce, by 2030.

The transformation will start quickly. By 2022, WEF expects, 42% of the core skills required to perform existing jobs will have changed. In addition to high-tech skills, specialized interpersonal skills - sales, human resources, care and education – will be in high demand.




In parallel to all this, economic and demographic shifts are putting additional pressure on the workforces of today. As the world moves further into the decade that the United Nations and others have called the “decade of action” to implement the [2030 Agenda for Sustainable Development](#), we must also focus on achieving equitable, inclusive progress to equip and enable the world’s people to thrive in the jobs of the future.

ALTERNATIVE CREDENTIALS

Alternative credentials for lifelong learning

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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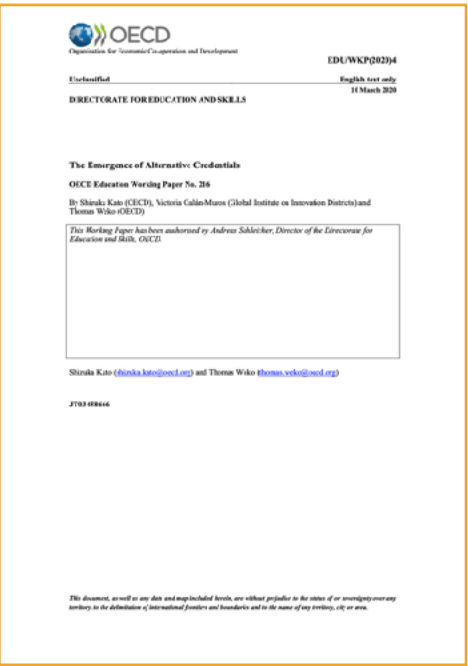
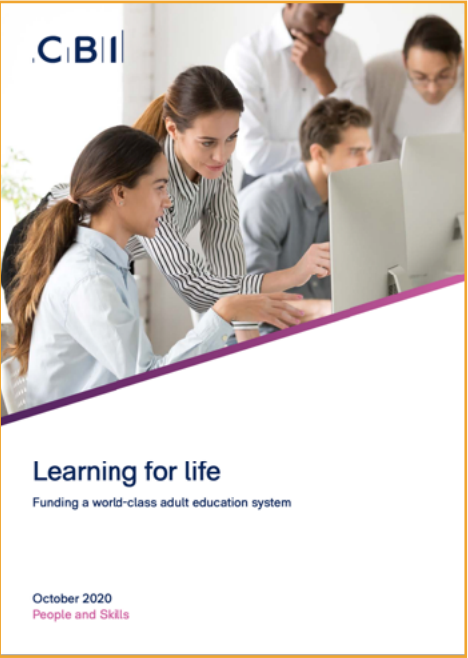
[Alternative credentials](#) - mini-qualifications in a given subject area or capability - are key to helping higher education reach non-traditional groups who need to upskill or reskill. Policy makers see them as a shorter, more targeted and flexible way to address the short-term needs of society and labour markets. For universities, alternative credentials offer a specialised and targeted way to

-  Widen participation to different groups of students who want shorter, sharper learning experiences that deliver an immediate career outcome
-  Use new technologies to deliver these outcomes to learners in a way that suits today’s busy and digital lifestyles
-  Create unique value that private incumbents cannot replicate

Strong examples include Australian RMIT’s online [professional education offerings](#); FutureLearn’s [microcredentials](#) which offer stackable credentials that allow learners to work towards degree qualifications; and [university branded bootcamps](#) (intensive, job outcome focused learning experiences).

The next decade will see universities contribute huge and unique value through major innovations in this space. [FourthRev](#) is an education technology start up working across Australia, the UK and the US to build collaboration between industry and universities to solve the skills crisis of the Fourth Industrial Revolution. In an [October 2020 blog post for The Higher Education Policy Institute](#), FourthRev CEO [Jack Hylands](#), highlights that increasing numbers of universities are working rapidly towards delivering such offerings, building new audiences and delivering meaningful outcomes beyond the traditional degree. By adding academic excellence and rigour to the alternative credentials formula and underpinning it with the sustained value that university credentials hold with employers, institutions can hit the sweet spot of student demand and employability success.

FURTHER READING



## WILL COVID DISRUPT THE SECTOR?

## Place your bets: Transformation? Interruption?

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Claims that Covid will fundamentally transform our universities may be overstated.

Covid has challenged many of our assumptions. The West's dominance has been brought into question as the UK and US have struggled to contain the virus while countries in the Global South have been more effective. Shutting borders in free-movement zones such as the EU has been unprecedented but has met with little resistance. Restrictions on civil liberties to fight the virus have been accepted in a way that would have been unimaginable before the pandemic.

In HE, the lockdown has forced students and staff to study and work remotely, challenging assumptions about how teaching is delivered and the ways staff work. It seems impossible to imagine this experience will have no impact on the future.

And yet... As global vaccination continues apace, it is conceivable that, by the 2021-22 academic year, universities could go back to old way of working. Some changes could remain - staff could work from home, more lectures could be recorded and made accessible online, for example - but it is entirely possible that fundamental university functions, the delivery of education or offers to students will not be transformed due to COVID-19 alone.

This is, in part, because universities have been largely immune to disruption. No UK university has collapsed or been fundamentally restructured due to the pandemic and student numbers have remained buoyant. Universities continued teaching in September 2020, most with some in-person teaching.




The question, then, is whether universities will revert to business as usual or use the pandemic as a stimulus for big shifts in policy and practice - much needed and essential for survival and fulfilling civic duties, some say. But Business as Usual seems both an easy and a likely scenario. So leaders need to seize this opportunity to think more deeply about how universities can adapt to meet the challenges facing our world. Failing to do so might just put the long-term future of the sector at risk.

## NAVIGATING CHANGE

## Or...adaptation?

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Change in higher education post-Covid will need to follow a path of adaptation rather than radical reinvention. Institutions will need to think carefully about how to adapt to a digital learning environment while maintaining the fundamental and foundational strengths of the in-person experience. Three key lessons from the first year of COVID-19 need to be taken into account:

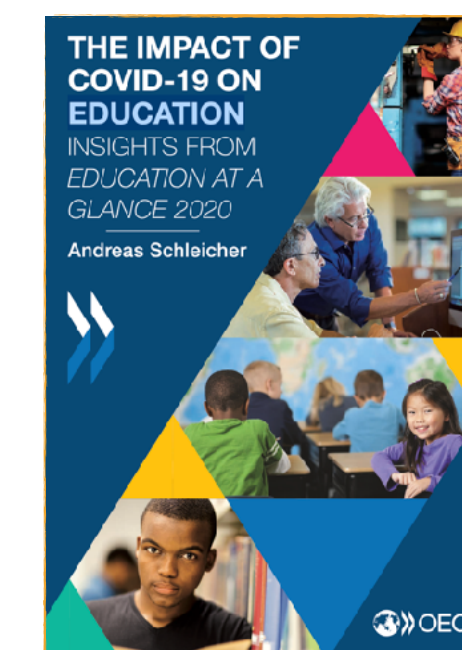
-  The essential core of every college and university is teaching and learning. Almost everything else in HE either stopped or was circumscribed in 2020. COVID-19 has taught us that the one thing that colleges and universities do that cannot be interrupted or sacrificed is teaching and learning.
-  The growing institutional focus on restructuring in response to new knowledge about how individuals learn now urgently required greater attention.
-  Some institutions are not, however, sufficiently prioritising teaching and learning and learning infrastructures are unevenly distributed across the sector. As a result, students with the least resources and the most significant barriers to learning have been disproportionately disadvantaged by the pivot to remote instruction.

Professors have been called upon to not only transition (sometimes instantly) their courses but also to provide their students with emotional and social supports that were previously distributed across campus entities and professionals. Well-understood and accepted pedagogical practices, such as universal course design and a system of delivery that is flexible and resilient, have been shown to be - at best - unequally present within and across universities.

Many tertiary educators are not entirely comfortable with online teaching. Only 9% of academics prefer to teach in a mostly online environment, according to a [2019 study from Educause](#). And while 51% are comfortable with blended learning environments, most of these (30%) prefer a mostly face-to-face teaching environment. No less than 43% of survey respondents preferred an exclusively face-to-face teaching environment.

This online shift will come as a shock to the system, then. But there is no escape from the necessities engendered by social distancing.

## FURTHER READING



LEADING PURPOSEFULLY

Leading purposefully in an era of contextual collapse

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The research set out in [this paper from MIT](#) are not aimed directly at higher education - that said, the interviews it is based on include one university president - but many of the findings and recommendations are as applicable to university leaders as they are to business leaders.

The research finds that today's digital workforce expect digital transformation to better reflect and respect their concerns and values, not just boost business capabilities and opportunities. MIT's global survey of more than 4,000 managers and executives, found that 72% of respondents strongly agree that it is very important to them to work for an organization with a purpose they believe in, but only 49% strongly agree that they believe in their organization's purpose. Furthermore, only 36% of respondents strongly agree that they believe in their organization's ability to advance its purpose. This "purpose gap" suggests that senior leaders lack credibility when it comes to aligning their organizations around a shared vision. That lack of credibility puts their companies' long-term competitiveness at risk.

Digitally savvy workers' talent and values appear to be tightly interwoven; obtaining their talent without their values is unlikely. But acquiring their talent and their values creates significant cultural and operational challenges for leadership. If those challenges are not thoughtfully and credibly addressed, that talent will rebel and/or leave.

Leaders who want be purposeful need to

- Actively communicate a strategic purpose that explains what the enterprise is trying to achieve in terms of both productivity and humanity
- Intentionally and systematically measure pursuit of purpose
- Be transparent about trade-offs
- Lead by example - and measure how affective (sic) their leadership is
- Analyze leadership networks to improve culture

FROM SURVIVING TO THRIVING

The true value of higher education

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Future students will want touch-of-a-button convenience and affordability and will weigh options within and beyond academe, such as [Google Career Certificates](#). They will be more financially and behaviourally risk-averse, socially conscious and activism inclined. They will inquire about institutional investments in safety, well-being and inclusion. They will demand accountability when harm occurs. They will take their tuition pounds elsewhere if a college or university doesn't meet their expectations.

While COVID-19 has elevated the focus on public health, higher education institutions should not regard the current priorities as merely short term or pandemic related. Future students will expect meaningful institutional efforts to prevent and address sexual violence, hazing, racist incidents and the like. This generation of customers supports brands that are investing in social justice and wellness, and it shuns brands that do not. Colleges and universities that make permanent, visible and meaningful commitments to supporting those core generational values will thrive going forward

Students will demand more than words; they want authenticity and transparency and want to see how campuses are committed to action. A strictly utilitarian approach will backfire. To support the students of the future and stay competitive, colleges and universities should consider adopting the following principles:

- Evolve to a preventative, not reactive, mind-set.
- Embrace the role of leaders as stewards.
- Embrace the role of students as change makers.
- Think of safety, wellness and inclusion from a curricular perspective.

Customer attitudes and expectations have shifted; inclusion, safety and wellness are student priorities and may eclipse formerly predictive metrics such as ranking, location and amenities. Successful institutions of the future will adapt to and understand these new college customer dynamics.



STUDENTS AS CONSUMERS

Is trust broken?

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Manchester 2020 highlighted the worst aspects of the tricky relationship that has developed between the student body and universities since the pandemic began.

New students were told they would receive blended learning and that everything would be as normal as possible – but that wasn’t the case. Students received little or no in-person teaching; they were ordered to stay in residences, often confined to apartments with people they had never met before; gyms and leisure facilities were closed; green space were fenced off; covid spread rapidly. When a metal fence was put up overnight, students tore it down. When a black student was held up against a wall by security guards and told he looked like a drug dealer, it felt like the university was a faceless corporation more interested in income than in providing a great student experience.

Students are choosing to hold their universities to account on. Students are consumers now, says Cathy Wippell, a third-year student at Manchester and co-founder of Student Action for a Fair and Educated Response (Safer). “It should have been very apparent they were promising something they couldn’t deliver,” she says. “We therefore demand, as consumers do, money back and compensation for unsatisfactory service.”

These issues are not unique to Manchester. Orla Katz Webb-Lamb, a second-year student at Sheffield, has invited students around the country to comment on their experiences via an online survey. “Like eating glass and staring into the abyss,” is one response. “We were lied to,” says another, “and then expected to produce the same quality of work while also paying the same amount of money for sub-standard experience. Especially when we pay rent for accommodation we were specifically told not to live in.”

“A lot of students have realised that we really are being exploited for profit,” says Finley Gore, a first-year student at Manchester who is helping to organise a rent strike. “The university’s business model depends on income from fees and rent, so they didn’t want students to stay away and defer their courses.” The resulting “Covid bath”, says Wippell, wasn’t only a danger to students: “Students’ families were put at risk, and the people of Manchester. If money hadn’t been a factor that wouldn’t have happened.”

TACKLING RACIAL HARASSMENT

Stop racial harassment

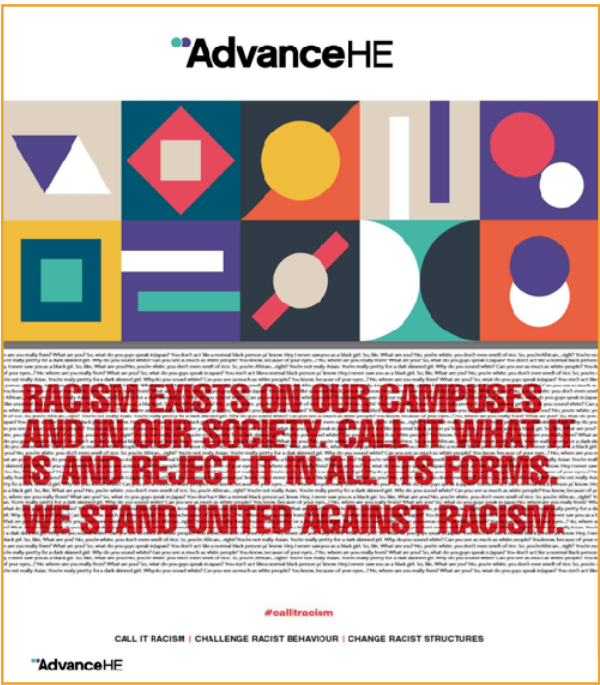
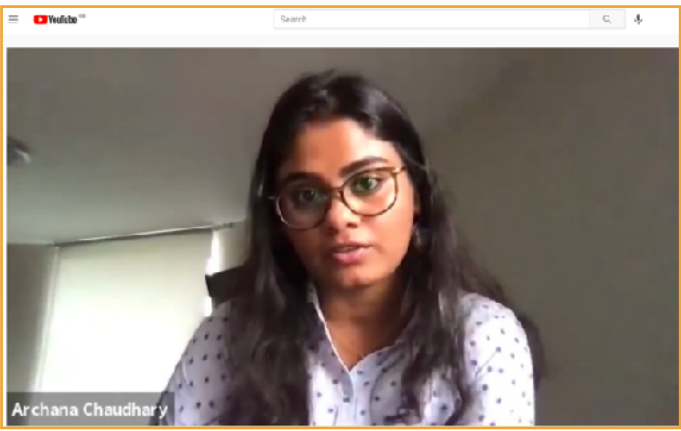
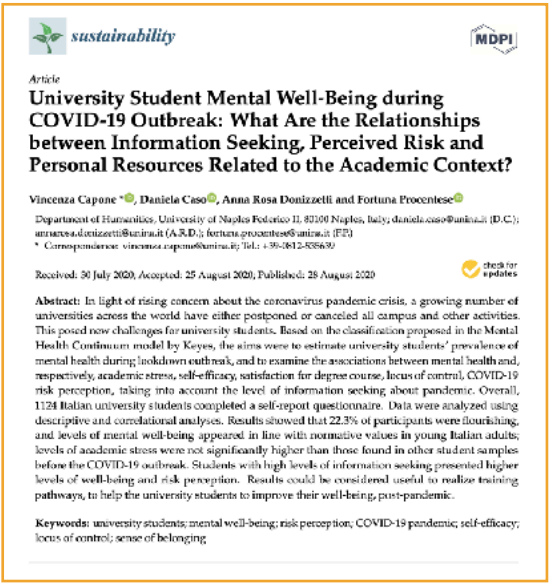
H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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- In November 2020, [Universities UK published recommendations](#) to tackle racial harassment in UK higher education:
- Publicly commit priority status to tackling racial harassment
  - Engage directly with students and staff with lived experience of racial harassment
  - Review current policies and procedures and develop new institution-wide strategies for tackling racial harassment
  - Improve awareness and understanding of racism, racial harassment, white privilege and microaggressions among all staff and students, including through anti-racist training
  - Ensure expected behaviours for online behaviour are clearly communicated to students and staff, as well as sanctions for breaches
  - Develop and introduce reporting systems for incidents of racial harassment
  - Collect data on reports of incidents and share regularly with senior staff and governing bodies

The guidance calls on university leaders to acknowledge that UK higher education perpetuates institutional racism. It also recommends training for senior leaders and governing bodies to improve their awareness; and it makes clear that efforts to address racial harassment will only succeed if the entire university community – including students, staff, alumni, and local partners – are engaged and encouraged to take shared responsibility for change.

Efforts to tackle racial harassment should be closely linked with wider work by universities to address racial inequalities in their local communities, as well as throughout UK society and culture

FURTHER READING



## WHO TAKES THE HIT?

## Pressure on fees

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Pressure is mounting for universities in England to offer rent rebates and academic safety nets for students, as staff and students say they have been left in limbo while institutions await further instruction from the government after a last-minute change to the start of the spring term.

The National Union of Students and the University and College Union, which represents staff, are urging universities to waive charges for the accommodation students are unable to use until face-to-face teaching resumes. For most students this is scheduled for when lockdown ends in mid-February, although the UCU, which [tracked more than 50,000 Covid cases](#) across campuses last term, is pressuring universities to remain online until Easter.

Students are also stepping up grassroots campaigns for fee discounts. A parliamentary petition [asking that fees be reduced from £9,250 to £3,000](#) had gained over half a million signatures by mid-January 2021. On 5 January, the Open University trended on Twitter as students turned to social media to complain that their degrees were now more comparable with its online courses, which cost £6,192 annually.

## THE COST OF THE PANDEMIC

## Sustaining the sector

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The pandemic could cost the Westminster government up to £12 billion extra in higher education funding for England over the long term in order to sustain the sector.

An increased number of domestic undergraduates starting university in 2020, coupled with lower graduate loan repayments across several cohorts, will add up to increased pressures on public financing of the system, [according to a report from the Institute for Fiscal Studies](#).

The annual report on education spending in England says the country's income-contingent loan system means "that a large negative shock to graduate earnings can dramatically reduce lifetime repayments and hence increase the long-run cost of the system to government".

Universities face several risks to their finances, including pension deficits and reduced income from accommodation, conferences and catering.

By far the largest source of financial risk is staff pensions. Reduced interest rates and depressed rates of return have significantly increased the expected cost of pension promises, further increasing the already large deficit on the main university pension scheme. New deficit figures for that scheme suggest the long-run cost to universities could be as high as £8 billion, double our previous central estimate of around £4 billion. The long-run cost to universities could be reduced by changes to the structure of the scheme or by significant increases in employee contributions.

## FURTHER READING





HOW RESILIENT ARE YOU?

Covid resilience ranking

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The Covid Resilience Ranking scores economies of more than \$200 billion (€169 billion) on 10 key metrics: from growth in virus cases to the overall mortality rate, testing capabilities and the vaccine supply agreements places have forged. The capacity of the local health-care system, the impact of virus-related restrictions like lockdowns on the economy, and citizens’ freedom of movement are also taken into account. The result is an overall score that’s a snapshot of how the pandemic is playing out in these economies - 53 - right now.

With growing speculation that the world will need to learn to live with coronavirus – and with the possibility of other kinds of significant disruptions - some academics are calling for a resilience ranking for higher education.

This could be a re-framing of university ranking metrics around resilience - the capacity to prepare for and respond to crises. Key criteria for resilience could centre on diversification, flexibility and innovation, risk, values, value maintenance, and community outreach. Existing rankings schema touch on some of these, but not through the resilience lens.

Ranking could indicate key strategic measures that rate the university’s ability to adapt to external circumstances and threats. These might be quantitative - the extent of shift from face-to-face learning to online teaching, for example – or qualitative – such as improved organisational practices and growth options that an institution has implemented.

MERGERS...?

Reshaping and consolidating for the future

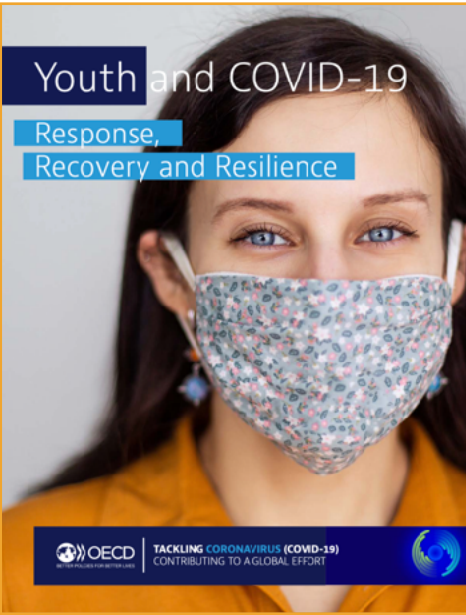
H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Mid 2020 saw sudden increased interest in the potential – or imperative – for university mergers. In May, [Universities UK](#) set out a proposal to government for a balanced package of measures to maximise universities’ contribution to the economy, communities and the post virus recovery – including the suggestion of ‘A transformation fund to support universities over the next two to three years to reshape and consolidate...or potentially merge.’

UUK’s proposal didn’t come out of nowhere. The 2019 annual PA Consulting survey of heads of UK higher education institutions found that (albeit for different reasons related to marketisation of the sector) 59% of respondents judged “significant numbers of institutional mergers or takeovers” to be “highly likely” or “quite possible”, while 74 per cent gave to be a possible/likely development in the sector. The report noted that a strongly held view that the disappearance of struggling universities in economically vulnerable towns or regions would be politically and socially unconscionable and that vice-chancellors were sceptical about at the likelihood of the government shutting the gates and sending the students elsewhere – a prospect so unattractive to all concerned that ways will be found to avoid that”.

In May 2020, the government’s [announcement](#) of a range of measures to protect students and the higher education sector from the impact of coronavirus was [read by some](#) as meaning future financial support would come with “attached conditions” and a “restructuring” assessment. Once again - and for different reasons than a year previously - mergers seem to be on the table. Moreover, these mergers might signal a strategic restructuring of further and higher education so that some universities become teaching and vocationally focused, with little or no time devoted to research.

FURTHER READING





CLOSURES...?

Thinking about change

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Some existing UK universities should be closed down while new institutions that are free from excessive regulation should be established to save the UK’s higher education sector, two scholars have claimed in a [report](#) published by thinktank [Cieo](#). Lee Jones, reader in international politics at Queen Mary University of London, and Philip Cunliffe, senior lecturer in international conflict at the University of Kent, call for a “fundamental rethink of UK HE”, which they argue was “already in deep trouble well before Covid-19 struck” as a result of over-expansion and marketisation. The authors say that widening participation has largely involved funnelling poorer students into low-quality institutions, while marketisation has led to wasteful spending, bureaucracy and managerialism. Their proposal is that the UK university sector be reduced in size, through a mixture of institutional closures, mergers and transformations. This would include the creation of three new kinds of institutions: new technical colleges; “super-universities”, formed by merging weaker institutions with stronger ones; and liberal arts colleges with a teaching focus.

The report also calls for the creation of four new “free universities”, one for each country in the UK, which would be endowed with independent funding and entirely autonomous from the government. “Their founding constitutions should commit them to the most wide-ranging pursuit of intellectual freedom, represent the widest possible range of intellectual views, and pursue research excellence for the long-term future, with a liberal ethos of teaching,” it says. “Faculties and departments should be focused around multi-disciplinary areas identified for future need and putting Britain at the cutting edge of global discovery.”

MARKETING ACCOMMODATION

The strategic importance of accommodation

H1	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Writing in The University Times, Nnamdi O Madichie, research fellow at the Bloomsbury Institute, considers the strategic importance of accommodation in the marketing of study destinations; especially for international students. In particular, he argues, student accommodation needs to be given more consideration and should be an area of priority attention in any discussions about the student experience in higher education. This is especially important in an increasingly competitive market for international students in the wake of COVID-19.

Madichie sets out a number of points that universities need to consider in their marketing strategy, including

- First time undergraduates mainly see the quality of student life as paramount. Formal academic work may rank alarmingly low to them and their approach to accommodation is about facilitating the student life experience
- Returning students – for whom learning is more important and who need assistance finding affordable housing – are more concerned with the academic experience and need support to find suitable housing
- Universities with low rankings might find their ranking improved if they invested more in student housing and communicated this more forcefully

Accommodation, Madichie argues, is an overlooked element of the total student experience; the NSS questionnaire, he points out, does not include an accommodation question, meaning the measurement of student satisfaction may be skewed. He goes on to suggest that universities and their partners will need to undertake due diligence and/or risk assessment to hone their student living offer and make it part of their USP for the student experience in the future. They need to ask themselves whether international students know about the cost of living in their country and how the hassle of finding suitable and affordable housing impacts on their time for study and class attendance.

FURTHER READING



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START

SOCIAL

TECHNOLOGICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL/LLEGAL

HIGHER  
EDUCATION

## THE END OF SMALL CAMPUSES?

## From physical to virtual location

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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[Unity College in Maine](#), which frames itself as "America's Environmental College," has opened up debate about whether small institutions really need to have flagship campuses to survive.

In a recently updated FAQ, college leaders wrote that for the time being, the school planned to "continue to offer face-to-face, experiential, environmentally-focused programs" on its 240-acre campus — once the campus reopens. At the same time, they noted, "If it is no longer financially viable, the college leadership has the ability to explore selling the main campus or any other college assets ... in order to ensure resources are allocated to best serve our students, their needs and the long-term sustainability of the college."

Unity, a private nonprofit liberal arts college, is on the small side with just under 1,300 students. However, enrolment rose after the school announced the "Path Forward," which shifted the college away from its traditional two-semester model, to a new calendar featuring eight five-week terms, enabling prospective students to apply to at any point throughout the year, with distance and hybrid classes.

Last September, for example, the institution announced its "largest incoming undergraduate class ever" — 296 new students — a 130 percent increase in distance education students. The change in format was made in response to a 33 percent decline in enrolment for the traditional format and a projected loss of \$12 million to \$14 million in the 2020-2021 academic year.

As the board of trustees explained in a letter to the campus community, "Once, the campus on Quaker Hill Road was our classroom, then Maine became our classroom. Now, our classroom is any location where a Unity College student is learning. As with schools across the country, we are considering the opportunities that presents."

Currently, all courses are being delivered online. The use of the hybrid learning approach is being considered for fall 2021, depending on pandemic conditions.

## KNOW HOW TO CREATE VALUE

## Freelance learning designers

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The next generation of academics and researchers could be lost to better-paying occupations as deteriorating employment conditions render university careers less appealing. Students may gravitate to explicitly vocational degrees leaving arts, commerce and some science degrees to wither on the vine. New trends could give rise to a wave of freelance academic “superstars” as institutional affiliations erode and “learning designers” supplant many traditional academics, says [a report by the University of Melbourne's Centre for the Study of Higher Education](#).

Lead author Gwilym Croucher admitted that attempts at prediction were “fraught” amid the evolving policy response to the pandemic. “Obviously, nobody knows what’s going to happen,” he conceded. “Having said that, Covid seems to be exacerbating some trends and it’s all happening at once. In that sense we can probably say something meaningful about what the future might hold.”

He highlighted workforce issues as a particular challenge. Casual and sessional staff were likely to be jettisoned just as baby boomer academics retired and international recruitment was hampered by lingering travel bans. Because they are big, complex organisations and have highly skilled staff, universities are quite hard to scale up and scale down quickly. If people go somewhere else, it’s not like you can just replace them overnight. People are not necessarily waiting in the wings.

Dr Croucher said much hinged on whether international student flows recovered, and students’ apparent acceptance of remote learning proved enduring. He noted that predictions of “online education being the future” had first emerged in the 1990s. “Thirty years later, on-campus is still considered by many people to be the gold standard.”

State governments may soon be asked to contribute in a manner they have not for a generation, the paper suggests. “The financial strain and continuing absence of most international students may force radical restructure of university workforces and missions and the possible emergence of a two-tier or at least two-track system.

## FURTHER READING



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PREDICTIVE LEARNING ANALYTICS

The promise of AI

H3	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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Contributing to [www.campustechnology.com](#)'s article on [25 Ed Tech Predictions for 2021](#), Deep Uppal, VP Innovation and Technology, Public Sector, [Information Builders](#) commented that "2021 has the potential to fulfill the promise of many artificial intelligence-driven analytic offerings to ed tech. Educators will be able to pair AI and machine learning models with the social, emotional intelligence of their students to augment curriculums with learning strategies that resonate most with students. With these models, educators have the opportunity to observe learning styles and behaviors in a comprehensive way. Educators can develop teaching strategies that support developmental strengths and sidestep comprehension roadblocks. With AI-guided roadmaps, students will be able to tailor the pace of their curriculum, allowing them to self-actualize learning objectives by consuming content that they are more prone to identify with and execute on.

"Enhanced analytics will further allow instructors to support multiple options for the consumption of course content through process-driven automation, allowing students to take a lead role in how they would like to be taught parallel to outcomes-based objectives.

"Lastly, advances in automation will also allow for constant instructor availability supported by multiple methods for communication (i.e., video, forum, chatbots) programmed to supply immediate feedback to commonly asked questions related to course structure, resources and instructor availability.

"The era of iTeacher hasn't happened yet, but we are definitely getting closer."

HE'S ROLE IN RECOVERY

Serving society's needs

H2	ACT	PLAN	TRACK	PARK	OPP	THR	NEU
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The HE sector could play a role in recovery

In February, the [Higher Education Policy Institute published a report](#) calling for a reassessment of the role that universities can play in serving society's needs.

This report calls for a focus on skills at both a local and national level, through a foundation of a National Skills Council with access to £400 million worth government funds. It also proposes that a share of national funding for innovation is rerouted to local investment, and a civic index is created to help monitor institutions' local engagement. To improve access, the report tables the scrapping of first-year fees for those who are the first in their family to attend to university, and that outreach programmes are strengthened.

Though this report was written and published before the coronavirus pandemic had hit the UK, it outlines the ways in which universities can be the backbone of recovery. By focusing on the creation of skills, civic engagement, and widening access – particularly at a time of lower employment – the worst damage could be at least mitigated. The regional focus also would serve to boost local economies and job creation, rather than just looking to London.

This report builds on the Augar Review, published in May 2019. This headline recommendation of this report was the lowering of annual tuition fees from £9,000 to £7,500 and the reintroduction of means-tested grants up to £3,000. The review also advocates moving away from structuring loans around undergraduate degrees, and instead packaging them as a lifelong learning allowance.

These recommendations consider FE and HE as being part of one system, geared towards plugging national and regional skills gaps. It also pushes for giving universities the right to award certifications at lower levels than a full-length degree. This greater flexibility would be intended to allow universities to serve the needs of a more diverse student base, and to effectively meet collective needs.

FURTHER READING



IMPLICATIONS FOR UNITE

- Is the UK likely to remain one of the top two international destinations? And, if so, are student numbers likely to concentrate around the top brands? Which parts of Unite’s portfolio might be at greatest risk? And over what timescale?
- Will the current global health crisis intensify social and economic inequalities across different higher education systems?
- Is China’s response to the pandemic consolidating its growing strength in the sector? Or weakening it? Are there any risks to Unite?
- What are the implications for UKplc if other nations begin to teach in English? Is English language a true differentiator? Or is brand UK the real factor in play? What are the threats - or opportunities - for Unite?
- What premium can brand UK command in the international higher education market? Unite?
- Will blended learning and the move to online teaching and micro credentials increase market size? Or will they displace campus based learning?
- Might all these factors combine to create a perfect storm where the live in sector contracts significantly? If so, how can Unite brigade and protect its own offer? Should Unite consider early exit from existing markets?
- Will higher education return to the business model that existed before Covid? Or will it transform to something quite different?
- Is change in higher education now an imperative? Who will be the winners and the losers?
- Can Unite do more to foster strong leadership in this age of change?
- What might threaten Unite’s existing strong reputation with the student body? What are the potential consequences for Unite if trust in HE continues to erode?
- Does Unite believe the sector is robust enough to survive the pandemic? Where are the potential weak spots in the system and how exposed could Unite be?
- What is Unite doing that will help future students live with coronavirus and other infectious diseases?
- What role might HE play in the UK’s recovery and renewal? Are there associated opportunities for Unite? Can Unite marketise what it has learned about safe living and sell it to other sectors?

STRATEGIC UNCERTAINTIES

- Will the US and UK continue to lead global HE? Or will the East take over?
- Will higher education return to business as before? Or will a new model emerge?
- Will blended learning and the move to online teaching and micro credentials displace campus based learning? Or complement it?
- Will Unite learn to adapt its offer to changing circumstances quickly? Or will it be slower off the mark than its competitors?
- Will HE acquire a strategic role in the renewal of the UK post Covid? Or will renewal be driven by government and the private sector?