

Engagement: the only competitive advantage in the age of AI

Fraser Duncumb

wotter

Contents

What is Employee Engagement?	3
What does Engagement mean?	3
The history of Engagement strategies	3
What does an engaged employee look like?	5
Why strive for Engagement, not happiness?	5
The world of work is changing	7
What is AI?	7
Is AI a threat to employees?	7
How will AI change the market?	9
What will AI do to companies?	9
The Importance of Engagement	11
Why did Engagement become so important Post-COVID?	11
What's next? Advanced technology, advanced problems	11
The solution: doubling down on culture to keep up	12
The impact of data and technology on Engagement	13
Data's overwhelming impact on sports strategy	13
How data can redefine Employee Engagement strategy	13
Data protects businesses against fatal false assumptions	14
The Millennial/Gen-Z overhaul; tech is on the rise	15
Why Engagement is the only competitive advantage	17
Citations	18

What is Employee Engagement?

Employee Engagement is the intrinsic motivation that drives individuals and businesses. Engaged employees demonstrate higher productivity, innovation, and retention; they have better workplace relationships and encourage higher Engagement in their peers. Approaches to driving Engagement have evolved from authoritarian techniques into perk accumulation into the improvement of company culture. Whilst Engagement can increase happiness, happiness does not create Engagement, therefore companies should strive for true Employee Engagement.

What does Engagement mean?

Engagement has had nuanced shifts in meaning over the last two decades, as the priorities of both companies and workers have evolved from discipline to happiness to well-being and Engagement. However, Wotter defines Employee Engagement as the intrinsic motivation of an employee or workforce.

To clarify, intrinsic motivation is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequence. This is separate from extrinsic motivation, which is more prevalent in contractual obligations, i.e. doing something for money or a similar reward.

This is ultimately the reason why someone learns to play the piano. Most beginner piano players are not learning the piano because of promised future earnings or fame, but because they find joy and satisfaction in the feeling of accomplishment one gets from learning a new skill. This joy and satisfaction also come from other sources, for example, gardening or cleaning and tidying. By aiming to maximise this feeling from an employee towards their work, companies can tap into the true potential of their workforce.

Intrinsic motivation is a tricky metric to measure reliably, however, it is what drives us to continue in the face of adversity or to go the extra mile. By focusing on intrinsic motivation as our measure of Employee Engagement, we can move beyond “happiness” which is not the sensible metric to use.

The history of Engagement strategies

There are many suggestions as to what Employee Engagement means, and it is not unreasonable to suggest that it has changed quite drastically over the last few hundred years. For much of the 19th and 20th centuries, employers largely judged Engagement using a small set of criteria, for example, whether the employee stayed with the company long enough to earn themselves a length of service award, along with other outdated metrics such as tardiness or the smartness of

one's clothes. As such, Employee Engagement 'strategies' have been geared towards establishing authority through discipline.

We choose, for the purpose of this paper, to focus on Employee Engagement strategy trends following the turn of the 21st century as this period alone has arguably driven more change in society's relationship with work than the entire preceding century.

The early noughties saw plenty of discussion of reduced tenures, as the infamous Millennials entered the workforce. It is common rhetoric to hear how loyalty is a great problem in the younger workforce, and yet studies have revealed that median tenure has remained largely unchanged over the past four decades (Fry).

There has been a trend towards a reduction in clerical jobs as these positions have been gradually replaced by computer systems and changing work expectations. The jobs that remain generally require more specialisation, both in skill and in company-specific processes, making these newer roles harder to replace or train someone into. This change may go some way towards explaining the perception of loyalty here, since while the underlying median tenures remain unchanged, the pain felt by a company in the loss and replacement of a given employee has increased, in some cases drastically.

In response to the acceleration of business automation, and the economic turmoil of the 2008 Financial Crisis, companies started to look at ways to stand out in their attempt to hire and retain talent. Thus begins what could be termed the 'Ping Pong Table' phase of Employee Engagement, where companies rushed to improve Engagement with games tables, free food and regular company socials. During this period, searches for "Company Culture" fell away, and searches for "Employee Engagement" began to increase (Google Trends), perhaps indicating the shifting mentality of companies.

The concept of Employee Engagement grew gradually in the public consciousness throughout the remainder of the 2010s as more companies found more elaborate and imaginative ways to signpost their care for their employees whilst in reality making very little impact on Engagement levels.

Then, the pandemic forced the world economy into disarray. Many major world events cause changes to reverberate through industries and societies, and the COVID-19 pandemic has been no exception. Working from home, previously a largely frowned upon initiative, was suddenly forced upon companies and workers worldwide, to mixed but loudly contested results. Interestingly, a gradual upward trend in searches for "Employee Wellbeing" can be seen prior to the pandemic, which has escalated into a clear positive trajectory since the start of the pandemic in early 2020.

What does an engaged employee look like?

Employees who report themselves to be engaged in their work consistently show higher productivity, innovation and retention. This manifests itself also in better interpersonal relationships with colleagues, better collaboration, better problem-solving and an improvement in many other metrics.

Engagement is also by nature viral; both low and high Engagement will spread to the rest of the team. In particular, Engagement of either kind spreads quickly to new team members during the early onboarding phase of their employment, ultimately reinforcing the culture with each new hire. We see this play out in many interactions, for example when we see our manager slack off and use this as an excuse to justify our own inactivity. An individual will adjust their expectations in line with those of the group around them.

This is reminiscent of the 5 Monkeys Experiment often cited in change management seminars. During the experiment, 5 monkeys were placed in a cage with a ladder and bananas at the top, and every time a monkey tried climbing the ladder, the experimenter sprayed all monkeys with icy water. Eventually, whenever a monkey started climbing, the others would pull it down and beat it to avoid being sprayed, even when the experimenter stopped spraying water. When the experimenter substituted each monkey with a new one, the new monkeys learned not to climb the ladder after being beaten when trying, so by the end none of the original monkeys remained but the group still discouraged any monkey trying to climb the ladder, despite none of them having ever experienced the icy water treatment.

Despite the original experiment never actually happening, it serves as a good analogy to the behaviour we so often see in businesses; high Engagement and poor Engagement spread powerfully from the existing team to new employees, the latter adopting behaviour often without a deep understanding of the culture or reasoning behind Engagement levels.

Why strive for Engagement, not happiness?

While it is undoubtedly true that happy people are more productive than their unhappy counterparts (Oswald et al. 789), happiness is a fickle and nebulous concept, spanning debates over nature vs. nurture, and all of the many elements of a person's life. A focus on employee happiness in the pursuit of greater Engagement leads companies to make decisions such as those made during the 'Ping Pong Table' phase, rather than focusing on the key elements that affect Engagement.

It is important to note that whilst directly pursuing employee happiness is not advised with Employee Engagement as the desired outcome, those experiencing higher Engagement at work often describe greater happiness.

However, this mapping is largely one way; though greater Engagement at work often results in greater happiness in a person's life, greater happiness does not necessarily mean greater Engagement at work. It should therefore be seen as outside of the scope of a company's control.

The world of work is changing

Technological advancements, notably AI, are upturning the world of work as we know it. AI is an exceptionally useful tool that can give us more time to solve big-picture problems with greater efficiency. This in turn drives innovation along with the creation of even more advanced technologies, which will create greater changes to the way we work. AI's potential is quickly creating competition that necessitates businesses to abandon old methods of work or be left behind.

What is AI?

In its most simple form, AI is the ultimate pattern spotting machine. Where humans can actively weigh up a small number of factors before making a decision, neural networks, the backbone of AI, can weigh up hundreds if not thousands. This is only limited by the computation power available to whomever is training the AI.

In turn, this allows AI to spot factors either imperceptible to humans, or even ones which have been discounted by humans for subjective reasons. A neural network has no preconceptions of the importance of factors, and but through lengthy and intense training, it finds its own answers to these questions.

AI has an incredibly broad range of applications, from facial recognition, to translation, to fraud detection in financial transactions, all of which have been effectively used for years. But the biggest change, and the focus of this part of the paper, has been the rapid creation of generative AI models. These take prompts, which can vary from a few words to a complex brief, and create something new, such as text, images or video.

From what initially starts as complicated mathematics, it is amazing what AI is able to accomplish, from creative writing, to spitballing new ideas, to devising complex strategies. All of which are completed faster, and often times better than an average human can achieve.

Is AI a threat to employees?

Since the invention of the Vaucanson lathe in 1751, which was a catalyst for the Industrial Revolution, and even of tools before it, society has feared the changes to work that new technological advancements bring. We have feared the impact of everything from electricity, motor cars and wars through to computers, mobile phones and cloud-based business software. Arguably these fears are justified, as each of those elements has changed, replaced or removed jobs, and yet it is important to remember that despite this, we have more people working and earning a living than ever before. As of June 2023, there are 1,034,000 job vacancies in the UK, which, despite a fall from the height of the pandemic, still

represents a 29% increase in jobs since pre-pandemic levels (Office for National Statistics).

AI is the latest such tool, and it arguably represents the biggest change yet. Both the power of the new tool, and the speed of technological advancement are unprecedented, so it is not unsurprising to see heightened feelings of fear over this change. This is the first time in human history that the Turing Test has been beaten, an “AI” has convinced a human that it is also human. However, this test is flawed, and what we have right now is not necessarily the birth of a new intelligent species as some would have you believe. This discussion falls somewhere outside of the scope of this paper, so additional resources are provided to further discuss this.

The important thing to remember about AI’s current form is that it cannot be used unsupervised. All currently available chatbots come with a disclaimer about inaccuracies and hallucinations, so while companies are rapidly experimenting and even deploying AI chatbots on their websites and in their products, there is a level of risk associated with it and so almost all deployments still retain some access to human operators in case of need: we are still a long way off from a 100% AI-run company being competitive.

This then becomes similar to calculators for mathematicians. When calculators became available there was discussion at the highest ranks of education about the effect of calculators in learning and in the wider fields of mathematics. The fear was that using a calculator was like a cheat, which removed the need for intelligence, reasoning or problem-solving within the user, which in turn would remove the need for mathematicians in general. To some degree this is true. Once upon a time, a reasonably advanced level of mathematical ability was required for accounting, and while some level is still required, much of the basic mathematical work is now handled by calculators and spreadsheets. To see this as a problem is to misunderstand the fundamentals of accounting. Accountancy is not the practice of mathematics, it is the practice of handling money as it relates to business, reporting and tax law. Reducing the manual labour of mathematics within this field simply allows accountants to focus on the industry-specific knowledge for which they are really valued. In a similar way, the purpose of customer support is to support customers with problems for which they require the help of a skilled human operator. Using an AI chatbot for the majority of basic questions, such as password resets or other minor technical issues, frees the human operators to work on more complex problems which they have the training and skills for.

On a societal level, these changes have allowed us to tackle problems more effectively than we ever have before, and while it is not the sole reason, it is worth noting that since office computers became commonplace, starting in the 1980s, that global GDP has more than tripled (The World Bank). This has led to an increased quality of life for the majority of the world, although it is of course important to recognise that there is still more to do.

How will AI change the market?

By removing yet more clerical elements of our work, we can expect AI to increase the productive capacity of workforces. However, it will also have the effect of making many elements of business which require skill or experience, from creating social media posts to coding to creating entire company strategies more quickly, easily and effectively.

As AI takes hold of industry and productivity increases, more companies will be able to push innovation. As companies quickly find more effective solutions to their problems through AI, they will be able to focus on other elements of their product base. The knock-on effects clearly follow as manufacturing companies create new innovations in their products, tech companies push their products further and service companies increase both the quality and breadth of their services.

This will herald a new era of innovation, just as Vaucanson's first all-metal lathe in 1751 unlocked the rapid creation of precision bolts (and ironically more lathes), which in turn spawned the creation of more machines which unlocked more advances in technology, which led through to internal combustion engines, which led to easier transportation, which led to increased trade etc. It is quite plausible that AI will lead to far greater advancements than Vaucanson's lathe, disrupting the world of work in a manner of unprecedented, unpredictable ways, which could be both exciting and terrifying.

What will AI do to companies?

With powerful tools at our fingertips, which take a lot of the manual (but not necessarily creative) skill out of a workflow, we can expect the bottom end of any given profession to rise in both output quality and productivity. This will in turn raise the game for any company that wants to remain competitive. Marketing will need to be better, and so will product design, customer experience, strategy and sales.

Products from suppliers will become better, which in turn will push a company's products to be better, in turn pushing expectations from the market downstream and increasing the competition for business. A failure to keep up with this fast-moving trend will increase the number of so-called zombie companies, and it should be expected that these companies, whether big or small, will fall away over the next 10 years.

This change will force companies to abandon the world they've known, in some cases for hundreds of years, in favour of a new world, with new information being presented and needing to be ingested on a regular, almost weekly basis. Every member of the company, from its lowliest employee to its highest executive will need to collaborate to embrace this new change, constantly adapting areas of the

company to maintain a competitive advantage. As the old saying goes, we will need to get comfortable with being uncomfortable.

The Importance of Engagement

In the advancing world of work with its infinite technological possibilities, companies will need to adapt on both an organisational and individual level to keep up; companies' ability to do so will hinge on their culture. An employee-first culture has already been shown to give companies a 4x performance advantage over their competitors; disparities will only grow in this new age.

Why did Engagement become so important Post-COVID?

COVID has undeniably caused the most extreme shift in working practice that the world has seen, in terms of the amount of change effected in the shortest period of time. It was not long ago that the thought of asking for flexible working or working from home would have sent shivers down the spines of many employees, fearful that they would be seen as disloyal or distracted, and potentially removed from the business. COVID has created an earthquake throughout the world of work, the crux of which has been shifting the balance of power from being firmly in the hands of an employer, to being somewhat more equal.

While this change has been badly received by many traditional businesses, with strong hierarchies and autocratic leadership, it has also presented an opportunity for forward thinking businesses. The increased conversation around employee wellbeing, recognition and respect has spurred in-demand talent to raise their expectations and search for an employer who will reach these needs, contributing largely to the Great Resignation which dominated headlines throughout 2022.

Companies are capitalising on the state of the employee market, introducing initiatives such as seeking continuous feedback in order to find and correct areas of weakness within the culture. This allowed these companies to benefit both from retaining their existing talent, and being able to attract more talent.

This trend is zero-sum, for every net winner in the competition for talent, there is a net loser also. This naturally leads us on to a scenario where, by choosing to not to compete for top talent, companies are actively losing their best people.

What's next? Advanced technology, advanced problems

In the changing world of work, with advances in AI and all of the other technological advances that are inevitable to follow, the needs of our customers likewise advance at pace. This will create pressure on individuals at all levels of the company to embrace these changes and leave behind the comfort of what they know about work. Some cultures will thrive in this environment, embracing

change, abandoning outdated processes and focusing on results and innovation, but most company cultures will struggle. Either through intellectual stubbornness or lack of care for the problem.

In this period, culture will be a company's only long-term competitive advantage, and it will become vital to protect it. A delicate balance between managing the existing culture in the face of change, retaining the most agile and talented staff, and hiring even greater talent, will become the only way to stay ahead in the fastest-changing industries. But even the less technologically affected industries such as construction or hospitality will see the knock-on effects of the changing world and may find themselves unable to compete for the talent they require in light of rapidly growing roles elsewhere in the employment market.

Wotter's recent study of leavers has shown a marked trend away from the old adage that people don't leave their jobs, they leave their managers, in favour of new thinking: people don't leave their jobs, they leave their teams. While this change at first seems subtle, it indicates a fairly notable shift. As company organisation structures continue to get flatter, employees are more affected by the Engagement of their team than in more vertical structures. This effect is compounded by the aforementioned changes in work, where the continued shift towards collaboration means employees spend more time speaking and working with their peers.

The solution: doubling down on culture to keep up

It is incredible what cultures can withstand and even grow from. There are plenty of statistics about the growth of companies under an "employee first culture" attitude; not least the famous Kotter and Heskett 1992 study that showed that companies with such an attitude outperformed their peers by a factor of 4x over the 11-year study.

It doesn't take much of an intellectual leap to see that a culture that fosters engaged employees who care deeply about the company they work for will embrace change and push themselves harder in the face of adversity than a culture that fosters fear, blame culture and pushes its employees deep into the realms of burnout.

Further to this, companies who embrace Employee Engagement and the openness to change it brings will find their workforce more stable, with less voluntary turnover of talent, and beyond that will find their talent acquisition efforts easier, as current employees either happily refer their friends and former colleagues to the company, as well as warmly welcoming new colleagues during their onboarding period.

The impact of data and technology on Engagement

Data and technology have already revolutionised the world of sports strategy; People strategy is following suit, with trailblazers like Netflix and Google reaping the benefits. Most companies don't understand the drivers of their disengagement, whilst businesses utilising data can pinpoint these drivers and track the effectiveness of remedial initiatives. As the tech-savvy generations begin to dominate the workforce, there are growing expectations for employers to adopt tech-based solutions to improve company culture.

Data's overwhelming impact on sports strategy

It has been well documented and often dramatised in films such as Moneyball with Brad Pitt, or the book Expected Goals by Rory Smith, how embracing data has revolutionised sports – in this case, Baseball and Football (Soccer) respectively.

For many years, sport was an art, both with respect to transfers and on-pitch strategy, requiring the intuition of scouts and managers to make decisions based on a variety of disconnected metrics.

When they coined their “Moneyball” strategy, Oakland Athletics were ridiculed publicly for their abandonment of baseball tradition, being told that you couldn't win a baseball game with data. Yet, Moneyball spread like wildfire, revolutionising the game and leading the Boston Red Sox to their first World Series title in almost a century.

People strategy within business is in a similar, but slower transitional period. Just as the Kotter and Heskett study of 1992 showed the business advantages of an “employee-first culture”, similar studies have backed this up. It is no surprise that some of the largest companies in the world, including Netflix and Google have famously focused on their employee culture all the way through their growth.

How data can redefine Employee Engagement strategy

Many companies talk openly about their care for their employees, and yet only 22% of companies know what's driving their employee disengagement (The Predictive Index). This disconnect is costing the world economy \$7.8 trillion annually (Gallup).

Meanwhile, for the vast majority of companies Engagement remains the traditional model, with executives and HR professionals using a “gut” read of the company to define their Employee Engagement strategy.

This often leads companies to spend money ineffectively, diverting funds to fix perceived issues that ultimately have little to no impact on hard business metrics such as profitability, customer satisfaction metrics or employee retention. In turn, this leads companies to the false conclusion that there is nothing that they can do, or that despite the problems they have, there are no further gains to be made.

While the revolution has been slower in the business world than the world of sport, likely due to the increased complexity of implementation in non-standardised businesses, the revolution is certainly in progress, and companies are quickly seeing the advantages of using data to shape their Engagement strategies. These companies know what the core drivers of their disEngagement are, and use metrics to track the effectiveness of the time and money which are spent addressing these drivers.

In the same way that computer-based CRMs, Marketing with ROI metrics and other once-complex solutions became basic necessities in companies, so too will an understanding of the metrics around Employee Engagement, Productivity and Loyalty become vital in the competition for talent in the next decade. Which side of that trend companies are on is entirely their decision.

Data protects businesses against fatal false assumptions

By accessing live metrics addressing the broad range of factors that impact employee experience, organisations are able to focus their limited time and resources on the metrics that will impact their Engagement, and thus the intrinsic motivation of their employees.

For example, given that company cultures are often created in the image of their leaders, a gregarious CEO will often create a sociable and “fun” environment at work. However, pride and connection to the purpose of a company have been shown to be major factors in Engagement, as backed up by Wotter’s recent report into company leavers. While at a glance this company may look connected due to its social interactions, it is quite possible that the connection is superficial, and masking a disengagement with the values and purpose of the organisation.

This example can also mask another insidious issue that companies face, where the particular brand of social Engagement favoured by the company can be off-putting to less represented groups within the organisation. For example, when companies focus heavily on alcohol-based socialisation, this can be off-putting to parents, or older generations, which in turn can provide problems with retention and connection in these areas. This becomes even more important as companies grow, and business processes diversify. A small recruitment company will probably benefit from a unified culture that appeals to ambitious, hard-working recruiters, but as the company grows and takes on more functions such as legal,

compliance or credit control, this can cause culture fractures between the core business functions and support functions.

By understanding these differences with clear data, companies can remove the “finger in the air” element of Engagement and people management and instead focus on creating high-performing initiatives that target the root of these issues. For example, above, the company could reach out to those who didn’t attend the event, and analyse their reasons and preferences, allowing them to adapt the event in future to the needs of more employees. This could be a complete change of event, or it could just be a change of a few small elements, such as starting a little earlier and moving the event closer to a transport hub, helping parents to access child care more easily and get home quicker.

The Millennial/Gen-Z overhaul; tech is on the rise

Intergenerational differences are nothing new; many generations throughout the 20th century rebelled against their parents, both the Baby Boomers in the 60s and 70s and Generation X in the 80s and 90s. It feels that the advances in social media are responsible not necessarily for creating further differences, but certainly amplifying the voices on both sides.

What is true, however, is that the pace of change is ever-increasing, which has led to an even greater divergence of beliefs of each generation. Technology of all forms has led to enormous changes in habit, but also belief. The way that we view knowledge has been forever changed due to search engines, our understanding of geography and directions has evolved with the help of GPS and especially since the pandemic, our expectations around meetings have changed from in-person to online.

It is generally true to suggest that the later someone is born, the more likely they are to be technology literate, and so as the workplace continues to cycle through generations, we see a higher percentage of the workforce eager to embrace technology. In 2022, the UK workplace makeup was roughly as follows (Clark):

- Baby Boomers - Born 1946 to 1964 - 12%
- Generation X - Born 1965 to 1980 - 36%
- Millennials - Born 1981 to 1996 - 38%
- Generation Z - Born 1997 to 2012 - 14%

In the coming decade, we can expect both the number of Baby Boomers and Generation X workers to fall away, and Generation Z to take up an even greater proportion of the workforce.

With almost 60% of the workforce already being made up of the largely technology-savvy Millennials and Generation Z, the adoption of new technology

will not only be easier but even expected within the workforce, as employees feel that if a problem can be solved with technology, then it should be, especially if that problem pertains to how they feel about work.

Why Engagement is the only competitive advantage

As discussed throughout this paper, an era of change and rapid innovation is upon us, and it is up to each of us whether we choose to embrace this and keep up, or simply watch it go by. It isn't easy to predict the exact nature of the changes that will define the next 5 years, beyond knowing that the change is inevitable.

In light of these unpredictable changes, it is important to remember that a business is just the sum of its capital, its processes, and its people.

Firstly, the value of a company's capital is changeable based on the value the market places on it, and even traditionally stable business assets such as property have seen fluctuations in the wake of the COVID-19 pandemic. A company can no longer expect that the value of its assets will remain predictable as new technology makes assets obsolete.

Secondly, processes will be ripped up by the changing expectations of the market, and companies will need to consistently re-audit their processes to ensure that they are keeping up with the requirements of their customers and other stakeholders. This will require a new form of rapid change management, where nothing is sacred, and any process can be scrutinised and re-energised at any moment. Competitive advantages will come and go as each change compounds and companies rush to provide the solutions the market needs.

This ultimately means that the only thing left of stable value is a company's people. They are the finest assets a company can have when combined with a culture that embraces new processes. A culture of consistent learning and improvement gives companies the ability to compete in an ever faster-changing market.

Culture is a company's only long-term competitive advantage.

Citations

- Clark, D. "UK employment by generation 2022." *Statista*, 29 June 2023, <https://www.statista.com/statistics/1393584/employment-figures-uk-by-generation/>. Accessed 30 August 2023.
- Fry, Richard. "Job tenure for young workers has been mostly stable in recent decades." *Pew Research Center*, 2 December 2022, <https://www.pewresearch.org/short-reads/2022/12/02/for-todays-young-workers-in-the-u-s-job-tenure-is-similar-to-that-of-young-workers-in-the-past/>. Accessed 27 July 2023.
- Gallup. "The World's \$7.8 Trillion Workplace Problem." *Gallup*, 14 June 2022, <https://www.gallup.com/workplace/393497/world-trillion-workplace-problem.aspx>. Accessed 12 August 2023.
- Google Trends. "Company Culture, Employee Engagement - Explore - Google Trends." *Google Trends*, 16 January 2023, <https://trends.google.com/trends/explore?date=all&geo=GB&q=company%20culture,employee%20engagement>. Accessed 27 July 2023.
- Google Trends. "Employee Wellbeing - Explore - Google Trends." *Google Trends*, 16 January 2023, <https://trends.google.com/trends/explore?date=all&q=Employee%20Wellbeing>. Accessed 27 July 2023.
- Kotter, J. P., and J. L. Heskett. *Corporate Culture and Performance*. New York: Free Press, 1992. *Harvard Business School*, <https://www.hbs.edu/faculty/Pages/item.aspx?num=139>.
- Office for National Statistics. "Vacancies and jobs in the UK: July 2023." *Vacancies and jobs in the UK - Office for National Statistics*, 11 July 2023, <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/emplo>

ymentandemployeetypes/bulletins/jobsandvacanciesintheuk/july2023.

Accessed 29 July 2023.

Oswald, Andrew J., et al. "Happiness and productivity." *Journal of Labor*

Economics, vol. 33, no. 4, 2015, pp. 789-822, <http://wrap.warwick.ac.uk/63228>.

The Predictive Index. "State of Talent Optimization." *The Predictive Index*, 2020,

<https://go1.predictiveindex.com/reports/state-of-talent-optimization-report/>.

Accessed 12 August 2023.

The World Bank. "Global GDP." *World Bank Open Data*, 16 January 2023,

[https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2022&start=198](https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2022&start=1980)

0. Accessed 29 July 2023.