Technology Sector Report

May 2022

North Edge.

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Foreword

Despite the current macro challenges and recent softening in valuations, we expect the UK technology sector to remain resilient and continue to thrive, which is testament to the strong and growing tech ecosystem that has been developed here in the UK. Spanning across several areas, the sector has and will continue to play a key role in supporting the Government's Levelling Up agenda, along with the transition to a high-skilled UK economy.

There is no doubt the sector continues to be an attractive market for private equity investors, with tech investment in the UK totalling £29.4 billion in 2021. From our own experience, we have added cyber security specialist, Distology, and energy software business, Correla to our technology portfolio in the last year. We have also invested more capital into a number of our technology businesses, firstly by supporting intelligence and investigation software business Altia acquire VeriSaaS, to further strengthen its international presence and broaden its proposition in October 2021, followed by the acquisition of CloudKB for Correla in March 2022, which adds capability in smart meters, electric vehicles and broader related smart energy assets.

We are pleased with the progress our portfolio has made to deliver on their value creation plans, continuing to drive growth and create value for all stakeholders. Highlights have included Altia and digital gaming business Catalis expanding into additional international territories, Correla expanding its product suite to support the UK's transition to net zero, and public cloud software specialist CTS evolving its approach to people, to continue attracting and retaining the best talent.

There are some clear themes that have helped to shape the success of this sector so far, including Cloud Enablement, Cyber Security, Energy Tech and Gaming, and in this report we dive deeper to understand the key drivers and challenges of each, whilst highlighting the experience we have gained from our own portfolio.

As well as attracting investment, it's also great to see that growth in this sector is proving to be a catalyst for positive change within the industry. This report explores the importance of diversity in tech and why sustainability is an imperative for the long-term success of tech companies.

The next twelve months will provide a new set of exciting opportunities for the technology sector, and we're proud of the role we can play - continuing to work closely alongside ambitious management teams to build better businesses, together.

Jon Pickering, Partner at NorthEdge

KEY STATISTICS
Market

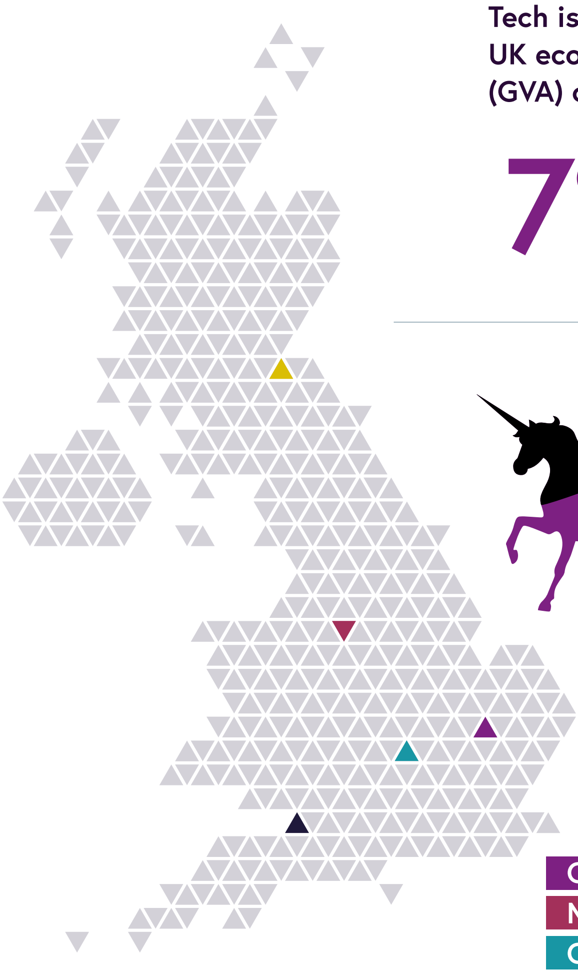
Tech investment in the UK grew 2.5x in 2021

2.5x

£29.4bn = 2021

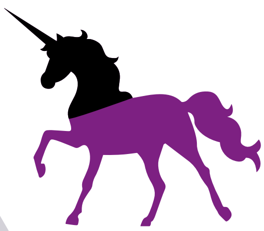
compared to

£11.5bn = 2020



Tech is becoming increasingly important to the UK economy with the rate of tech gross value added (GVA) contribution growing on average by

7% per year since **2016**



35% of tech unicorns created in the UK, are outside of London.

In 2021 Cambridge was recognised as the leading regional tech city in the UK, followed by Manchester (which was recognised as the UK's Tech Start-Up capital outside of London in a recent study by KLOC)

People

It is estimated that there are **3,000,000** jobs in the digital tech economy within the UK

50%

There was a 50% rise in overall UK tech job vacancies advertised in 2021 compared to 2020

Whilst the number of people in the sector is substantial, there is still a lot more work to do to make it more diverse:

14%

14% of the UK working population is from an ethnic minority group...

8.5%

...yet the ethnic minority representation of senior leaders in the sector is only 8.5%

25% of people in the sector are women...

25%

...but only 10% of females are currently taking A-Level computer studies which is further widening the gender gap

IN FOCUS
Cloud Enablement

95%

of leaders who are outperforming their competitors have adopted and implemented sophisticated cloud services

Revenue in the Cloud market is projected to reach

$18.3bn in 2022, increasing to **$23.8bn** in 2025

Recent cloud research discovered

50%

of all business workloads are expected to run in the cloud by 2023

Cloud spending is expected to take up

26%

of overall IT budgets in 2022

Google Cloud revenues for Q1 2022 reached

$5.8bn

up from $5.5bn the previous quarter and $4bn in Q1 2021

Two-thirds of leaders said that cloud enablement had allowed them to access the newest technologies

x2

Businesses that have been more strategic in their approach to technology are achieving more than twice the average revenue growth of companies slow to implement and use their tech

Cloud Enablement

Cloud technology is increasingly becoming a top board agenda item, as more businesses are transitioning to a digital first approach with cloud at the core. A recent report found that 50% of all business workloads are expected to run in the cloud by 2023, up from 40% in 2021. In line with that finding, cloud spending as a percentage of overall IT budgets has seen a four-percentage-point increase over the last two years — from 22% of overall tech spend in 2020 to an expected 26% in 2022. Furthermore, the UK public cloud market is projected to reach $18.3 billion of revenue in 2022, and according to the Technology Market Outlook, revenue of this market is set to increase to $23.8 billion by 2025.

Before cloud computing, businesses were responsible for storing all of their data on their own servers. Naturally this wasn't an efficient way of accessing data at speed and the sheer amount of data meant there was more risk of servers crashing or incurring threats from cyber-attacks.

Today, cloud technology has opened up limitless opportunities that have transformed the way we do business. Two-thirds of respondents in a report from Deloitte said that cloud enablement had allowed them to access the newest technologies and a further 93% said they used the cloud for some or all of their AI needs, which ultimately requires less investment in infrastructure and expertise.

95% **of leaders who are outperforming their competitors have adopted and implemented sophisticated cloud services.**

Not only has cloud technology helped companies to scale and adapt at speed, accelerate innovation, drive business agility, streamline operations, and reduce costs, it also leads to sustainable growth for the long term. Research from Accenture shows businesses that have been more strategic in their approach to technology are achieving more than twice the average revenue growth of companies slow to implement and use their tech – the running trend is 95% of leaders who are outperforming their competitors have adopted and implemented sophisticated cloud services.

This gap has widened further given the changes brought about by the Covid-19 crisis. As the pandemic hit, businesses that were at the forefront of accelerating their digital transformation journey to cloud were able to grow at four to five times the rate of tech laggards. Common characteristics that were crucial to success included re-platforming to move, rebuild and innovate in the cloud, reframing their strategy to prioritise progress over perfection, and extending their reach by expanding cloud enabled technology across all business functions – whilst also upskilling employees to work with the new tech to ensure it is embedded effectively.

As we begin to move on from the pandemic, it's clear that the rules of business are forever changing, and that the scale of uncertainty can often be overwhelming for business leaders. However, businesses are also realising that the cloud presents a new opportunity to outmanoeuvre this uncertainty and open up new ways of working that creates sustainable value.

As companies seize on cloud as the key enabler to complete their digital transformation, it's worth remembering that a change on this scale certainly doesn't happen overnight. The key winners will be businesses that can navigate this change rapidly, make the right choices that complement and expand on their current capabilities, and those who train, develop and prioritise their people to work with the new tech.

Investment in the UK cloud market is only set to multiply, especially following the news that Amazon Web Services (AWS), the public cloud market leader, recently pledged to spend £1.8bn on cloud computing infrastructure in the UK over the next two years. As Google Cloud and Microsoft Azure continue to build their offerings to compete with AWS, this represents significant investment opportunities for businesses operating in the UK cloud market.

PORTFOLIO FOCUS

cts

Cloud Technology Solutions (CTS) is a business that provides cloud migration and management through its proprietary software and managed services.

There are two parts to the business – the services side, which provides a full suite of professional and managed services to help businesses transition to Google Cloud, and the software side of the business, CloudM, which is a SaaS data management platform that allows businesses to migrate and manage their cloud-based collaboration licenses, such as G Suite and Office 365. The business has developed a strong offering of cloud transformation services and software products, with CTS operating as the largest dedicated Google partner in Europe and CloudM performing over 68 million migrations across 107 countries worldwide.

> **We recognise the significant role we have to play in modernising major institutions and transforming businesses, so that they can seamlessly transition to the public cloud. The investment from NorthEdge has ensured our technology and team of software experts remain at the forefront of the global demand for cloud and has allowed us to take advantage of this rapid expansion within the tech sector.**
>
> **Tom Ray, CEO of Cloud Technology Solutions**

Read more of the latest tech trends and topics from CTS.

IN FOCUS
Cyber Security

Cybercrime cost the UK economy a total of **£2.5bn** in 2021

The total annual revenue within the Cyber sector had reached **£10.1bn** in 2021

14% reflecting a 14% increase since 2020

The UK is one of the top **3** global exporters of cyber solutions and expertise

54% of business leaders admitted their organisation is currently at risk of a data breach

A further **50%** admitted their team doesn't have the time/specialist skillsets to protect the organisation from a cyber-attack

Cyber Security

Despite all the positive progress achieved through technological advancements in recent years, it has also brought an unwanted increase in cybercrime and fraud. You don't have to look far to see some of the high-profile businesses that have fallen victim to cybercrime, with inadequate protection seeing security systems breached within many businesses, organisations and now even nations.

Naturally the rise in cyber and data crime has increasingly impacted businesses, as they have incurred significant losses, as well as increasing operational complexity to manage and mitigate cyber risk. A recent report showed four in ten businesses have had cyber security breaches or attacks in the last twelve months, which cost the UK economy a total of £2.5 billion in 2021. The disruption also goes beyond the financial cost, with organisations in the UK taking an average of 181 days to identify the fact a breach had occurred, and a further 75 days to contain the incident.

As a result, the cyber security industry is growing rapidly as more organisations look to secure themselves from the ever increasing threat of cyber attacks. The UK Cyber Sectoral Analysis report found that the total annual revenue within the sector had reached £10.1bn in 2021, reflecting an increase of 14% since the 2020 study. 2021 was also a record year for cyber security investment raised in the UK, with over £1 billion raised by dedicated cyber security firms across 84 deals.

Right at the heart of this cyber revolution is the UK – our cyber security market is the largest, most concentrated, and accessible cyber market in Europe, worth over £8bn. World-leading cyber firms are located here, taking advantage of exceptional pipelines for talent and investment. The UK is one of the top three global exporters of cyber solutions and expertise, exporting £4 billion worth of cyber security in 2019, far exceeding the target of exporting £3 billion by 2023, which was set in 2018. There is estimated to be around 1,838 firms active within the UK providing cyber security products and services, with 16% of these having a physical international presence.

Whilst the UK continues to provide access to cutting-edge cyber security expertise that will keep firms resilient and competitive as the cyber landscape evolves, it's interesting to see how this has translated into business processes. NorthEdge portfolio company Distology carried out a study on 'The Future of Cybersecurity' and the findings were surprising in relation to how many businesses are not well-equipped to deal with cyber security issues. Of the study, 54% admitted their organisation is currently at risk of a data breach, 40% weren't confident that people in their business would be able to spot a cyber security risk, and 50% admitted their team doesn't have the time/specialist skillsets to protect the organisation from a cyber attack.

These figures serve as an alarming reminder for businesses to prioritise a cyber security mitigation and response strategy, with the right blend of training, technology and services for their organisation. Taking early pro-active steps can avoid potential attacks which could, in turn, not only save them financially, but avoid putting their stakeholders at risk and causing a detrimental impact to their reputation.

There isn't a one size fits all approach to tackling cybercrime but the responsibility lies with business leaders to bring the conversation to the forefront, set the tone for expectations and take accountability for ensuring their business has the right set of cyber standards in place.

At NorthEdge we take our responsibilities as investors and employers seriously. We support our portfolio companies throughout the investment cycle to mitigate their risk of cyber-attacks and effectively manage their cyber security response through a programme run by a specialist third-party operating partner. We encourage sharing of best practice through our dedicated operating platform, Nexus, and share regular insights from specialists in our network.

Ray Stenton, Managing Partner at NorthEdge

PORTFOLIO FOCUS

Distology.

Our portfolio company Distology is a leading specialist cyber security services partner.

Representing vendors of IT security technology products across EMEA, Distology help to protect businesses' digital estates from the growing threat of cyber-attacks. Given the impact of Covid-19, the rise of remote working and the increasing threat of more sophisticated cyber-attacks, the cyber security market has become one of the largest high-growth markets, with revenues in the sector nearly doubling between 2017 and 2021. Distology have been able to capitalise on this demand and build on their exceptional growth journey, to become one of Europe's leading service partners to cloud-based cyber security software vendors.

We've seen an incredible amount of innovation from businesses over the past two years as they have evolved to ensure business continuity through remote working technologies and e-commerce platforms to meet customer demand. However, this agility comes with the increased risk of cyber threats, as attackers are using smarter techniques to target vulnerable businesses. Whilst businesses can take pro-active steps to understand where the major risks are and decide upon sensible mitigation moves, it's also important to remember that many businesses are not alone in the uphill struggle to secure their organisation. To secure our lives as best as possible, we need to work together, as peers, to educate each other on what solutions could be adopted, and finding the right blend of cybersecurity defences, detectors and responses for each organisation.

Lance Williams, Chief Product Officer at Distology

Click here to read Distology's 'The Future of Cybersecurity: 2022 & Beyond' report.

IN FOCUS
Energy Tech

88% of business leaders cite technology as a key priority to unlock and accelerate the energy transition

Energy Tech Investment

1. Sweden
2. United Kingdom
3. Germany

Within Europe, the UK is second only to Sweden for 2021 energy tech investment

UK increased 36%

$1.1bn in 2020

$1.5bn in 2021

Of the 7,190 energy tech scaleups globally

489 of these high growth companies reside in the UK

representing c.7% of the global total

Energy Tech

In November 2021 Glasgow hosted COP26, bringing together thousands of world leaders and climate delegates to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention. Following the conference, several agreements were made, including a combined effort to tackle climate change, reduce greenhouse gas emissions and provide adequate finance for both.

It is widely acknowledged that government policy alone will not be enough to meet international climate goals. Businesses will also need to play their part, and this couldn't be more evident than in the tech sector, as it is clear that technology will play a vital role in helping limit global temperature rises and accelerate towards net zero (the balance between the amount of greenhouse gas added and removed from the atmosphere).

A report from Deloitte highlighted the general optimism shared between businesses, across several industries, to reduce their emissions to zero by 2050. More than 88% of respondents cited technology as a key priority to unlocking and accelerating the energy transition. As well as governments, emphasis was placed on energy companies and the financial sector as being key players to driving this change. In light of this, 'energy tech' has emerged as a key area where businesses can focus on energy innovation and help businesses tackle the climate challenge head on.

The Government recognises the significant investment needed for this transition and have shown their support with several initiatives outlined in their 'Ten Point Plan for a Green Industrial Revolution'. In the report they outline their vision for the UK to be a global leader in the technologies needed to decarbonise our economies and transition to net zero. They plan to take the necessary steps towards net zero by investing in and then harnessing research and development, innovation, new technologies and talent.

To accelerate the progress towards this plan, they have committed to launching the £1 billion Net Zero Innovation Portfolio, which will focus on priority areas including £100 million investment in Greenhouse Gas removal technology and £100 million for energy storage and flexibility challenges. The Government believe that this portfolio will generate a further £1 billion of matched funding and could result in over £2.5 billion of follow-on funding from the private sector. These commitments represent significant opportunities for businesses within this space, which goes someway to explaining the substantial growth in the market across the last twelve months.

In light of the commitments agreed at COP26, it is no surprise that energy tech investment is ramping up across the continent, rising by over 300% in many nations, such as Sweden, the Netherlands, and Austria. Within Europe, the UK is second only to Sweden for 2021 energy tech investment, with Sweden's investment statistics driven by $1 billion investment into Swedish business Northvolt, the clean energy battery manufacturer with an 80% lower carbon footprint compared to traditional manufacturers that require coal energy. Alongside the US, China, and most recently Sweden, the UK continues to be a global player at the forefront of the energy tech transition. Of the 7,190 energy tech scaleups globally, 489 of these high growth companies reside in the UK, representing around 7% of the global total. The UK has long been a leader in the global energy tech landscape, and as such it has received significant investment across the last twelve months with energy tech investment increasing from $1.1 billion in 2020 to $1.5 billion in 2021, a rise of 36%.

Energy Tech Investment	£1.1bn in 2020	£1.5bn in 2021	36% Rise

Despite the increase in investment, the market itself is still in the early stages of growth. This is evidenced by the fact that nearly half of UK energy tech companies are at seed stage, a further 40% are at venture stage, and only 10% of active UK energy tech firms are classed as established. As the market continues to evolve, it's clear that there is significant further growth to come in the future.

In order to meet this growth, there are a range of challenges energy tech businesses must overcome. In some circumstances, many of these challenges match those experienced by businesses in the wider tech sector.

The first challenge lies in hiring talent, over 45% of companies within the industry have cited either 'team', 'talent' or 'hiring' as one their top three challenges to scaling. In what is already proving to be an underlying issue for the wider tech sector, attempting to find individuals with the correct skill set required to enter an emerging market is proving challenging.

The next set of challenges surrounds funding to support businesses on their next phase of growth. Although the Government has set out commitments to fund the decarbonisation of the UK, its recognised that the financial sector will play a pivotal part to support the funding of these new innovations and technologies.

Finally, in order to reach the UK's ambitious net zero goals, there will need to be a degree of collaboration between emerging energy tech businesses and the larger incumbent energy companies. This is a challenge for both parties to solve in order to unlock the possibilities presented through collaboration, ensuring that new technologies can be developed and accessed by a wider target market.

Although uncertainty still remains over the specific pathways and timescales to achieving net zero in the UK, the trend towards a low-carbon future has clearly been set. Governments, governing bodies and organisations alike must now collectively overcome the challenges and harness this momentum to accelerate towards net zero.

PORTFOLIO FOCUS

Correla is a business that aims to help to create a less complex and more sustainable energy sector. It is the only technology service provider with end-to-end visibility of the UK's gas network, and enables access to this data through a real-time, visual and interactive analytics dashboard – enabling customers to monitor the impact of Carbon reduction programmes and drive efficient energy usage. In March 2022, the business acquired CloudKB which was a hugely important milestone for Correla. It provides the business with the teams, technology, and knowledge to drive the industry forward, accelerating the adoption of smart meters, electric vehicles and heat pumps in the UK – a key part of Correla's wider diversification strategy into alternative energy markets.

> **The UK has an incredible task ahead to meet its decarbonisation targets and we're committed to supporting customers every step of the way. NorthEdge's investment came at a critical time for us as we look to develop new products, services and technologies that will remove complexity from the market and unlock operating models that better support the UK's energy transition.**
>
> Sian Jones, CEO of Correla

IN FOCUS
Gaming

At the current rate of growth, it's estimated that the mobile gaming market could be worth

$272bn by **2030**

A reported **6 in 10** people use their mobile device to play games

In the UK

20.5m

games were downloaded digitally in

2021

equating to

£3.8bn

while

15.3m

games were bought physically

Only

42%

of UK games were bought physically in the last

12 months

demonstrating the industry is shifting rapidly into the Cloud Gaming space

Gaming

When we think of some of the many tech trends across the last few years, you don't have to look far to recognise the role the $90 billion global digital games industry has played in bringing entertainment into people's lives. The industry has come a long way from the blocky textures found in arcade games, with gamers now expecting fully fledged 3D worlds and Virtual Reality experiences, whilst interacting with other players across the globe in real time.

Like many digital experiences, the pandemic has helped to fuel growth in the industry, accelerating some of the key trends and bringing with it a new wave of innovation. Research from Morgan Stanley found that the US, second only to China as the biggest video game market, had over 50 million Americans who took up gaming in 2020 – a huge 31% increase year on year, compared to the previous two years which reported a steady 7% increase.

This major influx of new gamers has in part been driven by many of the major players who have lowered the barriers to entry. Services like Xbox Game Pass provide players with a vast library of titles for a low monthly subscription cost, allowing more people to enjoy some of the most popular games.

The transition of gaming into the mainstream is further reinforced when we look at console sales from 2021. Across the year it was neither the newly released PlayStation 5 (12m global sales) or the Xbox Series X/S (7m sales) that delivered the most sales, but rather the five-year-old Nintendo Switch (21m sales) that took the accolade of top-selling console. Nintendo's cheaper, family-friendly alternative goes against all norms and shatters the perception that gaming is reserved for 'enthusiasts', instead suggesting that it is entertainment the whole family can enjoy.

Naturally as the industry appeals to a broader demographic, we are seeing a shift in behaviour for how people access and play games. Only 42% of games in the UK were bought physically in the last 12 months, demonstrating the industry is shifting rapidly into the Cloud Gaming space. Recognising that users want to play games across multiple screens, whether that's consoles, laptops or even phones, most of the major players now offer cloud-based subscription models to accommodate this, including Microsoft, Sony, Google, Nvidia, Tencent, and Amazon.

The games business as we know is growing exponentially and one of the reasons is the move from the physical to digital. Physical copies can be risky due to the high costs during production and the added headache of ordering too many copies, which is why the digital space is proving more attractive for publishers. Whilst the switch has been happening for a number of years now, the pandemic has really seen this trend take off.

Dominic Wheatley, CEO of Catalis

Under this model, there is no need for gamers to continuously buy and upgrade their equipment year after year, it's as simple as streaming content through a cloud data centre. This has also opened the door for games developers to create cross-platform games to allow players to collaborate and play online together. It appears that the future will be software-focused, where publishers will make their games playable on as many devices as possible.

The transition has also brought about a new wave of innovation to the industry. Virtual Reality (VR) isn't anything new, but over the past five years there has been a significant uptake in VR gaming, especially across some highly popular titles. As the hardware is becoming increasingly affordable, and as developers continue to integrate the technology to create immersive experiences, 2022 is shaping up to be an exciting year for VR.

Another area that has seen an explosion of growth is mobile-based gaming, with current estimates forecasting that with a compound annual growth rate of 11%, the market could be worth $272 billion by 2030. This surge has been driven by a reported 6 in 10 people using their mobile device to play games, with women being 10% more likely to be active mobile gamers within the UK than men. The time commitment is also staggering, with women also over indexing on this metric, spending on average close to 12 hours a week playing mobile games, as opposed to 10 hours 30 minutes for men.

The casual mobile gaming market represents a huge opportunity for developers and we're starting to see more apps introduce microtransactions. Developers are using elements of social interaction and gameplay to keep players engaged for longer, which means they are more likely to purchase in-game transactions - whether that's new clothes for their avatar, power-ups or to enjoy an ad-free experience.

Whichever way you frame it, the growth has been phenomenal and with access to some of the world's most cutting-edge technology and a growing appeal across a wider demographic, the gaming industry is set for a fascinating transformation. At the heart of this change lies the consumer, who will ultimately shape the direction and size of this growth across the next few years.

In terms of investment, the UK gaming industry is flourishing and is attracting interest from major brands from around the world. According to research from business advisory firm BDO, it was another record-breaking year for the industry with M&A deals reaching £1.9bn in 2021, representing a c.63% increase on the £1.2bn in 2020. A total of 14 takeovers of UK businesses took place in 2021, compared to nine in 2020.

The UK Government has also pledged £50 million of investment for creative industries to drive economic growth in the years ahead. The gaming industry had been identified as one of the key areas for economic progression and £8 million of this fund will go directly to start-up developers in the UK.

PORTFOLIO FOCUS

Sumo is an international award-winning video game developer, and was a NorthEdge portfolio company from 2014 to 2016. Working in partnership with top tier publishers including Sony and Microsoft, the business has produced AAA franchises including Little Big Planet 3, Forza Horizon 2 (Xbox 360) and Disney Infinity 3.0, which have sold millions of copies worldwide.

Following NorthEdge's investment Sumo increased its headcount from 240 to 340, launched a new Nottingham studio, increased revenue by 60 per cent and doubled profits. This success was underpinned by an expanding client base and investment into the in-house technology engine, which has seen the business continue to grow significantly beyond our ownership. In January 2022, the business became a subsidiary of Tencent, a multinational technology and entertainment conglomerate, and the largest company in the video game industry in the world, in a deal valued at $1.27 billion.

Cubic Motion, an award-winning facial animation studio, developer of advanced computer vision technologies and portfolio company from 2017 to 2020, developed 'Persona', a new set of hardware and software solutions, which allowed them to translate an artist's performance and bring digital characters to life in real time – something which none of their competitors could do. This ultimately led to the acquisition of Cubic Motion by strategic acquiror Epic Games in March 2020.

Current portfolio company Catalis provides publishing and quality assurance services into the high growth, global digital games market through two divisions, Curve Digital and Testronic, from its offices in the UK, US, Canada, Poland, Romania & Serbia. Curve is an award-winning publisher of independent video games across all major console and PC platforms with a catalogue of titles including Human: Fall Flat, which has sold in excess of 30 million copies to date, For The King, Bomber Crew and The Ascent. Testronic provides quality assurance services to the global games publishing and film and TV markets.

TAKING RESPONSIBILITY

Over the last few years responsibility has taken on many different names and meanings. In the context of business, it generally refers to a company's commitment to do more than just make a profit – focussing on building a business that will be sustainable for many years to come.

The name often associated with this commitment is Environmental, Social and Corporate Governance (ESG). Although the case for a strong ESG proposition becomes more compelling when looking to combat issues such as climate change and the gender pay gap, it also makes sense from a commercial standpoint. A recent study from PwC found that 66% of respondents cited value creation as their main driver for ESG activity.

Corporate responsibility is no longer a nice-to-have, it's now a key factor in judging the value of a business and will continue to be long into the future. Within the tech sector, ESG will remain a key area of focus – especially surrounding the topics of People and Sustainability.

People

Naturally when the topic of ESG is raised, people tend to gravitate straight towards the environmental aspects of the acronym, but there is an increasing need for businesses to have a broader focus, not just on its commitments to sustainability, but also in terms of their responsibility to their people, their wellbeing, and the internal systems and processes that ultimately ensures a company's lasting success.

Within the tech sector this need has been heightened given the significant changes brought about by Covid-19. Across the last few years, the pandemic has caused an unparalleled wave of tech adoption for businesses across all industries. Companies have had to adapt quickly to work from home, connect with customers virtually and digitally transform their business in a time like no other.

With the effects of the pandemic still being felt, companies are beginning to put permanent plans in place to continue investing in tech and modern ways of working to survive. This new wave of tech adoption brings with it significant challenges to find and hire the best people in the tech industry. Whilst the shortage of tech talent is not a new problem, Covid has severely intensified the issue, creating what is being defined as the 'Tech Skills Gap'.

518,000 **additional workers will be needed to fill the roles available for the three highest skilled occupational groups in the digital sector by 2022.**

A report from the UK Government highlighted just how fierce the competition is for qualified tech talent. In the Tech Competitiveness Study, the UK Commission for Employment and Skills estimated that 518,000 additional workers will be needed to fill the roles available for the three highest skilled occupational groups in the digital sector by 2022. To put this into context, this is three times the number of computer science graduates this nation has produced in the past decade. The inability to fill this talent shortage is forecast to cost the UK tech sector $27.7 billion in unrealised growth by 2030.

It seems this issue is also a key area of concern in tech board rooms – with 66% of executives struggling to fill vacancies for digital roles and 50% reporting challenges in recruiting roles with specialist tech skills, predominantly software engineers or data analysts.

Whilst these reports have created a call to action to attempt to solve this issue, it's clear that more needs to be done to 'close the gap'. Initiatives such as upskilling the workforce and teaching advanced digital skills in schools will go some way to solving the problem, but can often take years to implement and put into practice.

In the short-term, providing interesting work, flexibility and creating a purpose-led culture is proving important to talent in the industry. In 2021 technical challenges and flexible working were what mattered to developers the most when considering a job offer, with 54% of developers saying that flexibility, or the lack thereof, will affect whether they stay at an organisation in the future. Building a compelling employee value proposition has never been more critical for technology companies, which is not as daunting as it sounds. Understanding what employees' rate most about an organisation is a great place to start, followed by making sure it is communicated effectively. Just as important is the onboarding process, making sure there are no delays to the process and keeping in touch with new starters ahead of them joining a business can ensure engagement remains high.

Another solution to filling this talent shortage is to prioritise encouraging more diversity into the tech industry and focus on building an inclusive approach that will allow the diverse talent to reach their full potential. A report from McKinsey shows that companies in the top quartile for both gender and ethnic diversity are 12 percent more likely to outperform all other companies. Whilst the evidence certainly stacks up for promoting diversity to serve as a catalyst for faster growth, productivity and innovation, it's not a trend that is necessarily reflected across the sector.

In Tech Nation's Diversity in Tech Report 2021, it's reported that for every 100 people working a digital tech job, only 25 were women – whilst 49.8% of workers in the labour market as a whole are women, in tech it's half that at 25.5%. Furthermore whilst 14% of the UK working population is from an ethnic minority group, the ethnic minority representation of senior leaders in the sector is only 8.5%.

14% of the UK working population is from an ethnic minority group...

8.5% ...but only represent 8.5% of senior leaders in the tech sector

Currently the UK tech industry needs over 500,000 more workers to fill the talent shortage. It will be impossible to meet the labour needs of the sector unless all groups within society can enter the workforce in large numbers.

> **At the beginning of February we held our first in-person portfolio forum, centred on the topic of People. The day highlighted the importance of people within our businesses and the crucial role they play in driving growth and maximising value. It was fantastic to see so many people come together to connect, collaborate and share the insights they have learned from their careers so far.**
>
> **Ray Stenton, Managing Partner of NorthEdge**

Whilst the pandemic has intensified the 'Tech Skills Gap', companies that start taking pro-active steps to firstly attract and then retain their talent, will ensure they create the foundations of a strong and sustainable business.

Within our own portfolio, cloud technology business CTS, recognised that the biggest impact it can have from an ESG-perspective is its approach to people. Since our investment in 2018, we have supported the business to continually evolve its people approach to ensure they are attracting, retaining and developing the very best tech talent.

This has led to **CTS** introducing several initiatives including:

- Defining their core values – they are what the business lives by and dictates how it does business:

GET INVOLVED | APPRECIATE OTHERS | TRY NEW THINGS | CRACK ON

- Becoming a Flexa verified employer demonstrating their commitment to a fully flexible working culture – which saw them ranked as one of the world's most flexible companies in the 2022 rankings
- Dedicated DEI, Environmental, Charity & Culture working groups
- 'Elevate' – an internal development programme designed to build the next generation of leaders with 65% of their managers coming from internal promotions
- Utilising the B Corporation framework to set their people policies and processes
- Various wellbeing initiatives and mental health support services
- Enhanced parental leave
- Partnerships with Wagora, who strive to bridge the gender gap in the technology industry, and myGwork, a business community for LGBTQ+ professionals, graduates and inclusive employers

Over the last 10+ years our open culture has been the backbone of our growth. We've nurtured an environment that empowers our people to get the job done. Meanwhile, we invest in their education, development, and – whether for family, mental health or other reasons – we give the flexibility to maintain a real work-life balance.

Chris Bunch, Managing Director of CTS

Sustainability

Following on from COP26 and given the net zero ambitions of the UK Government, it's clear that businesses will play a vital role in driving change towards a greener, safer and more prosperous future for our people and the planet. Businesses sat within the tech sector have a huge sphere of influence in developing and implementing the technologies that will prove pivotal in progressing towards this ideal.

Sustainability isn't a new idea, but it seems it is only now getting the attention it deserves in the tech industry. Tech leaders realise that it's not only the right thing to do, but that it also makes sense from a commercial standpoint. In a report from KPMG, tech leaders placed environmental/climate change as their biggest risk to growth and the majority agreed that in order to achieve long term success, they must look beyond purely financial growth.

There is also increasing demand from customers requiring tech companies to not only provide products and services at competitive prices, but to do so while improving their ESG performance. In the age of mass media, it's becoming increasingly common for consumers to head to social media to circulate ESG failures or criticise business with undesirable practices, which can cause significant reputational damage. Tech CEOs are well aware of this, with 74% feeling it is their personal responsibility to ensure their organisation's ESG policies reflect the values of their customers.

Only 26% of tech companies report they have incorporated ESG into their strategic planning.

Whilst exposure to these issues has heightened awareness and appreciation for ESG measures, it still hasn't fully transitioned into business practices yet, as only 26% of tech companies report they have incorporated ESG into their strategic planning. This is a statistic that is going to need to change fast, especially to rise to the demands of the UK's decarbonisation journey. Businesses will be required to start measuring, acting on and improving the emissions they are responsible for to support the UK on the road to Net Zero and transition towards a low carbon economy.

In another KPMG report 'Survey of sustainability reporting at tech businesses', it suggests that 83% of tech business are now reporting on sustainability, however this only paints half a picture. Although 70% of these tech businesses are reporting on carbon reduction targets, just 44% link them to global climate change goals. A further 50% state that their reporting acknowledges climate change as a risk, yet only 24% report climate risk in line with Task Force on Climate-related Financial Disclosures (TCFD).

Whilst it's encouraging to see more businesses actively reporting on ESG measures and giving it more attention, the challenge lies in translating this into an actionable plan to implement initiatives across the organisation and drive value for all stakeholders in the long term.

Whilst setting a net zero target can seem daunting, there are a host of organisations and resources available that can support businesses on their net zero journey. Organisations such as Tech Nation have created a Tech Zero taskforce to support tech companies to create a climate action plan and accelerate progress towards net zero.

They suggest a net zero action plan requires three steps:

1. Measuring baseline emissions

Which are categorised into scope 1, 2 and 3 emissions in line with the Greenhouse Gas Protocol. For tech companies, around 80% of emissions fall into scope 3, which account for emissions in a company's value chain, such as goods or services bought, business travel, employees commutes, and investments held.

2. Setting a science-based target

Which involves setting an ambitious but achievable net zero target and a measurable action plan to get there.

3. Removing the emissions that can't be reduced

Which includes prioritising high-quality long-term carbon removals and offsetting residual emissions that can't be eliminated.

Across our own technology portfolio, we have supported several businesses to improve their sustainability measures and the impact they have on the planet – some notable examples include Correla's commitment to be Carbon Plus by 2025 and CTS using the B Corp framework to guide how they grow the business sustainably. This is alongside our own commitment to build our net zero plan at NorthEdge.

At NorthEdge, we work with all of our portfolio companies to build better businesses that are both sustainable and diverse. We do it because it's the right thing to do, and because we know it makes businesses more valuable for all stakeholders.

Ray Stenton, Managing Partner of NorthEdge

Our **Technology** Track Record

14 investments across **4 funds**

altia.
Catalis
CMAP
correla
cts
CUBIC MOTION
Distology.
iPortalis
JIGSAW24
lights4fun
PHOEBUS
pimberly
SUMO DIGITAL
utiligroup

About NorthEdge

NorthEdge is a lower-mid market private equity firm headquartered in the North, owned, and built by its senior team, supported by a global blue chip investor base. We have £900m AUM across four regionally focused funds.

Headquartered in Manchester, with offices in Leeds and Birmingham, we have a 25-year track record of investing in businesses with ambitious management teams and significant growth potential. Our current portfolio of 26 businesses employs 7,400 people..

We look to invest in like-minded businesses and management teams who have real ambition and the potential to shape global markets. We back management teams, in the Technology, Healthcare, Business Services and Specialised Industrials sectors, who recognise the value of having an experienced business partner alongside them, supporting them to build a better business.

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