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Technology Fast 50 UK 2022



Location trends

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Foreword

Duncan Down

Deloitte UK Technology Fast 50 Programme Lead

It's been another challenging year, with the cost of living crisis, supply chain disruption and rising interest rates putting pressure on SMEs across the UK. Yet despite these pressures, the UK's technology sector continues to show resilience and companies are finding impressive ways to overcome these challenges.

This year we had another phenomenal pool of entrants to our Deloitte UK Technology Fast 50 programme, which celebrates and champions the UK's fastest-growing technology businesses. This year's Fast 50, perhaps more than ever, demonstrates the wide range of innovative companies being built and scaled in the UK.

In fact, our winner in this year's list – mobile gaming company Tripledot Studios – did not appear in 2021's list. Tripledot Studios, which offers a unique take on classic games such as Solitaire and Sudoku, has achieved astonishing growth of 69,387% over the past four years – a figure not seen since 2017. The London-headquartered company, founded just five years ago, is now worth \$1.4b and we look forward to seeing where the company heads next.

As our Fast 50 programme shows, the UK's tech sector is a key driver of economic growth. The average growth rate of the 2022 Fast 50 winners is an impressive 4,568%, across sectors including fintech, software, healthcare and media.

These companies are solving problems, providing employment and supporting local communities.

Take second-place Wonde, for example, which creates vouchers to help students get access to school meals and is now expanding to help refugees and housing association tenants. Meanwhile Cera, in sixth place, is transforming the UK's overburdened care system by a digital-first healthcare-at-home approach. There are so many exciting businesses in the UK and we are proud to showcase them in our annual programme.

This is our 25th year of running the Fast 50, and in this year's report we explore themes including the cost of living crisis, Government policy, innovation and retaining talent.

The UK's tech sector is a world leader when it comes to technology innovation, and we need it to stay that way. In this year's survey, leaders of these businesses told us of the importance of R&D tax credits and of the Government providing clarity on tax, policy and regulation. Others wish the visa system could be simplified – making it easier to bring new talent into the UK – and that the Government would do more to support green initiatives.

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Clearly there are many positives to doing business in the UK, but access to talent and access to funding are critical for the UK to remain competitive on the world stage, and we have no doubt these will remain priorities for Government at what is a potentially precarious time for UK entrepreneurs.

We were overwhelmed by the quality of entries for this year's Fast 50 programme. It was truly humbling to see UK technology businesses across a range of sectors who are doing such innovative things to improve our lives and society as a whole. Each has proved they have the right ingredients for growth in spite of the wider economic obstacles.

The Fast 50 programme and performance of its winners is juxtaposed to the broader economic climate this year, with many countries expected to head into a recession in the coming months, and difficult times ahead for governments, companies and consumers. We wish everyone safe passage through these choppy waters, As Winston Churchill may or may not have once said, "Success is not final, failure is not fatal: it is the courage to continue that counts".



The 2022 winners



UK Technology Fast 50

Rank	Company	Growth	Region	Sector
1	Tripledot Studios	69387%	London	Media & Entertainment
2	Wonde	31762%	South East	Software
3	Nonacus Ltd	28211%	Midlands	Healthcare
4	Onto	9467%	Midlands	Environmental Technology
5	Plum	7735%	London	Fintech
6	Cera	5707%	London	Software
7	iamproperty	5068%	North East	Software
8	Cudos	4240%	London	Software
9	OKRA.ai	4227%	South East	Software
10	Airtime Rewards	3937%	North West	Fintech
11	OnBuy.com	3402%	South West and Wales	Media & Entertainment
12	Sintela	2829%	South West and Wales	Hardware
13	Deazy	2615%	South West and Wales	Software
14	ClearBank	2453%	South West and Wales	Fintech
15	Xydus	2053%	London	Software
16	Motorway	1993%	London	Software
17	Ziflow	1980.3%	London	Software
18	Rai l sr	1980.2%	London	Fintech
19	Blink	1884%	London	Software
20	Amiqus	1865%	Scotland	Fintech
21	Elvie	1824%	London	Healthcare
22	E l ement	1783%	London	Software
23	E-Pharmacy	1737%	South East	Healthcare
24	Red Sift	1665%	London	Software
25	Freemarket	1654%	London	Fintech
26	Pupil	1574%	London	Software
27	Napier	1566%	London	Fintech
28	Appvia Ltd	1564%	London	Software
29	Multiverse	1344%	London	Software
30	EO Charging	1320%	South East	Software

UK Technology Fast 50

Rank	Company	Growth	Region	Sector
31	Solidatus	1317%	London	Software
32	Paysend	1184%	London	Fintech
33	Cognism	1079%	London	Software
34	Popsa	1070%	London	Software
35	Soldo	1059%	London	Fintech
36	GetAgent Ltd	1054%	London	Software
37	Panaseer	1049%	South East	Software
38	Aparito	1031%	South West and Wales	Healthcare
39	Forecast	1016%	London	Software
40	Sunamp	993%	Scotland	Environmental Technology
41	iProov	966%	London	Software
42	Influencer.com	965%	London	Media & Entertainment
43	Navenio	923%	South East	Software
44	Omnisend	902%	London	Media & Entertainment
45	LOQBOX	875%	South West and Wales	Fintech
46	Nexus FrontierTech	856%	London	Software
47	Moneybox	824%	London	Fintech
48	Distributed	823%	London	Software
49	ManyPets	810%	London	Fintech
50	The Original Fit Factory Ltd	792%	Scotland	Software

Fast 50 Women in Leadership

Rank	Company	Growth	Region	Sector
1	OKRA.ai	4227%	South East	Software
2	Elvie	1824%	London	Healthcare
3	Element	1783%	London	Software
4	E-Pharmacy	1737%	South East	Healthcare
5	Aparito	1031%	South West and Wales	Healthcare
6	Sunamp	993%	Scotland	Environmental Technology
7	Navenio	923%	South East	Software
8	Simply	558%	London	Fintech
9	Better2Know	509%	North West	Healthcare
10	ORCHA	321%	North West	Software

Regional winners

Region	Company	Growth	Sector
London	Tripledot Studios	69387%	Media & Entertainment
	Plum	7735%	Fintech
	Cera	5707%	Software
	Cudos	4240%	Software
	Xydus	2053%	Software
	Motorway	1993%	Software
	Ziflow	1980.3%	Software
	Railsr	1980.2%	Fintech
	Blink	1884%	Software
	Elvie	1824%	Healthcare
	Element	1783%	Software
	Red Sift	1665%	Software
	Freemarket	1654%	Fintech
	Pupil	1574%	Software
	Napier	1566%	Fintech
	Appvia Ltd	1564%	Software
	Multiverse	1344%	Software
	Solidatus	1317%	Software
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	Soldo	1059%	Fintech
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	Nexus FrontierTech	856%	Software
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	Sunamp	993%	Environmental Technology
	The Original Fit Factory Ltd	792%	Software

Rising stars

Rising Star Award	Company Name
Oracle NetSuite	United Fintech
Deloitte – London	<i>new</i> cleo
Multiverse	The Electric Car Scheme
Deloitte – Regions	Vaarst
Business Growth Fund	Walr

The Winners in Context



Introduction to this year's Fast 50

Overview

The Deloitte UK Technology Fast 50 programme recognises the world-class achievements of the UK tech sector and celebrates the innovation and entrepreneurship of high-growth tech-enabled companies. In this special 25th anniversary edition of the programme, our report focuses on 25 years of incredible success stories of Fast 50 companies and on this year's cohort of Fast 50 companies, which are growing at a tremendous pace despite the volatile post-pandemic environment.

The Fast 50 awards programme has four categories: the Technology Fast 50; the Fast 50 Women in Leadership; the Regional Winners; and the Rising Star award. For the Technology Fast 50, Fast 50 Women in Leadership, and Regional Winners, rankings are based on four-year revenue growth rates. The four categories are described in more detail opposite. Of course, all companies must be technology companies, which requires them to meet at least one of the following criteria:

- Owns proprietary intellectual property or proprietary technology that contributes to a significant portion of the company's operating revenues
- Manufactures a technology-related product
- Devotes a significant proportion of operating revenues to research and development of technology
- Is technology intensive, or uses its own unique technology to solve problems

The Deloitte UK Technology Fast 50 programme categories

The UK Technology Fast 50 is a ranking of the country's 50 fastest-growing technology companies, based on percentage revenue growth over the last four years. It has been produced every year since 1998.

The Fast 50 Women in Leadership category is new to this year's programme and recognises those companies within the Technology Fast 50 that are either led by a female CEO or have a founding team comprised of at least 50% women. The ranking is still judged on the same percentage revenue growth over the last four years as the UK Technology Fast 50 and has the same entry qualifications.

The Regional Winners category recognises the fastest-growing business within each region of the UK, based on where the company is headquartered. The ranking is determined by percentage revenue growth over the last four years and entry qualifications are the same as the UK Technology Fast 50.

The Rising Star award recognises the innovation and achievements of UK tech businesses that are leading the way but have not been in operation for four years and therefore do not qualify to enter the Technology Fast 50 awards. Deloitte and the Fast 50 sponsors nominate and name a Rising Star as part of the programme.

UK Technology Fast 50 Winner

Tripledot Studios



FIRST PLACE OVERALL LONDON REGIONAL WINNER 69,387% GROWTH "We had a small team in Ukraine impacted by the conflict – we relocated 60 families which was a bit complex," says Lior Shiff. "We've also relocated some of our team in Minsk to Poland and Barcelona." Listening to the cool precision with which Shiff highlights the challenges he has navigated over the last couple of years, one could be forgiven for assuming that he is a top strategist or government advisor rather than the CEO of successful casual game developer Tripledot Studios.

Under the leadership of Shiff and his co-founders
President Akin Babayigit and Chief Product Officer
Eyal Chameides, the London headquartered company
has come a long way in a very short space of time.
Founded in 2017, the business has gone from "three guys
with an idea" to a company with over 400 employees in
six international offices. Its flagship mobile games are
Woodoku – a mash-up of the sudoku and block puzzle
genres – and a unique take on the classic solitaire.
Both are available on iOS and Android.

In February 2022, the company raised \$116m in a deal that valued it at \$1.4b, boosting it to unicorn status – a private company valued at more than \$1b. The round was led by 20VC – the venture firm of podcaster Harry Stebbings – with participation from other investors including Lightspeed Venture Partners.

Shiff's encompassing appraisal of the challenges faced by the company is likely born of his eight years working in military intelligence for the Israeli Defence Force. He was responsible for a multidisciplinary team of 40 engineers, scientists, mathematicians, and programmers at the age of 24. "The experience taught me to think holistically and to create impact," says Shiff. In 2007, Shiff co-founded social gaming company Product Madness which was acquired in 2012 by Aristocrat. "We all take something from past experiences and it makes us who we are."

•• We like to create games that people will play for a long time, for years from now. ••

Shiff says that a strength of his is building strong teams: "Everyone is smarter and better than me, which makes everything easier." Tripledot certainly has a strong founding team. COO Babayigit has deep experience in games and tech. Having spent five years at Facebook, where he led the audience network team and the games team in Europe, he moved on to Activision Blizzard King, where he served as Head of Business Operations and Special Projects. Holding degrees from Harvard Business School and Yale University, he held senior positions at Skype, McKinsey & Co, and Peak Games. He is also an investor in various gaming companies in the UK, Israel, and his native Turkey. Chief Games Officer Eyal Chameides also did a three-year stint in the Israeli Defence Force in media roles before completing a BA in Games Design at the Royal Melbourne Institute of Technology. He joined Product Madness as an Art Director, rising to Creative Director and Head of Art before co-founding Tripledot Studios.

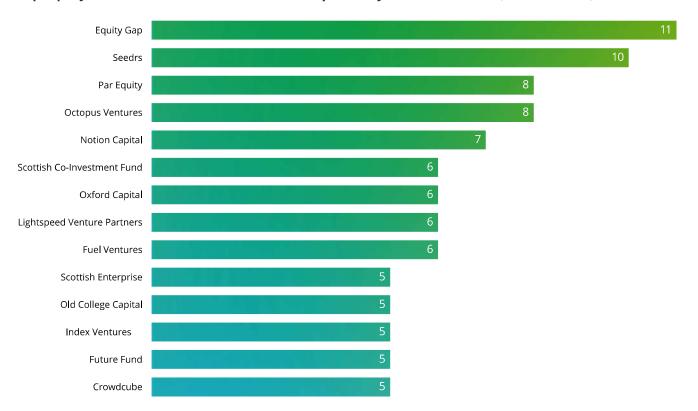
Shiff says that the founders love games and love the business of games. "The company's DNA is more business orientated than some of our peers." He explains how the founders deliberately chose to enter competitive game categories such as solitaire to reduce the company's

product risk, allowing them to focus on execution – an area where they knew they had an edge. Shiff describes the company's creative process as driven by hypotheses that are tested with data. "The company believes in data and science. We do what the data says." He explains that the company might test 20 hypotheses for improvements to games only to have three be successful, but that this approach can dramatically move the needle.

The wisdom of this approach is indeed borne out in the data - Shiff says several million people play Tripledot Studios' games every day. The company is also exploring strategies for inorganic growth. It acquired US-based Live Play Mobile in March 2022. The company live streams hosted games to consumers who can play alongside on their mobile devices. "We're a value-added buyer," says Shiff. "We're looking for opportunities where one plus one equals three; Companies that have made great games but where we can help them operate better." The company also has plans to utilize more traditional media going forward to reach new audiences and aspires to be a household name and maybe a listed company. Shiff is careful not to lose sight of what's important: "We like to create games that people will play for a long time, for years from now."

Top investors in the Fast 50

Top equity investors into the 2022 Fast 50 companies by number of deals (2012-H1 2022)



Equity investment can be critical for high-growth companies as it provides entrepreneurs and leaders with much-needed capital to help them grow and scale their businesses. It can also help companies to attract and retain top talent, as employees are often attracted to companies where they have the potential to share in the financial success of a company upon exit. Finally, equity investment can also give companies a valuable stamp of approval, which can help them to attract even more investment in the future. This breakdown provides some insight into the investors that have backed this year's Fast 50.

Equity Gap is the most frequent funder of companies in this year's Fast 50 based on a total of 245 equity investment deals since 2012

The angel investment syndicate focuses on high-growth companies based in Scotland. It often co-invests with Scottish Enterprise – a governmental body that focuses on the economic development of Scotland. The two funds co-invested into Sunamp (ranked 40), a company that develops thermal energy storage devices, on three occasions between March 2015 and October 2018, with the deals totalling £6.6m.

Equity crowdfunding platforms Seedrs and Crowdcube also feature among the top investors, having participated in 10 and five deals respectively. This shows the continued support crowdfunding platforms provide early-stage businesses and aligns with the investment activity in the UK's wider high-growth ecosystem.

Fast 50 Women in Leadership Winner

OKRA.ai



NINTH PLACE OVERALL FAST 50 WOMEN IN LEADERSHIP WINNER 4,227% GROWTH

"We've been playing music without sheets and now we're writing it," says Loubna Bouarfa, founder and CEO of OKRA.ai, explaining how the company's artificial intelligence (AI) technology is being used to support pharmaceutical companies to bring the right drug to the right patient at speed. "We help uncover insights that are business critical and directly impact physicians and patients," says Bouarfa, "and so far we're only just scratching the surface."

Founded in 2015, Cambridge-based OKRA.ai creates "intelligent AI brains", for the life sciences and pharmaceutical industry. These systems extract, connect and enrich data to power different software products, each tailored to the different stages of the drug creation and commercialisation lifecycle. Its products include systems to assist with drug price prediction, medical affairs strategy, sentiment prediction, and sales and marketing optimisation.

Bouarfa, who is Dutch-Morrocan, started the company over seven years ago after working as a research data scientist at behavioural insights and fraud prevention company Featurespace. She had previously completed a PhD at the Netherlands' Delft University of Technology, before taking a postdoctoral position at Imperial College London.

In 2018, motivated by her passion to deliver ethical and trustworthy AI, Bouarfa started a two-year stint as a high-level expert on artificial intelligence for the European Commission. "When advising the European Commission on AI, we agreed that AI systems are those that have a high degree of autonomy," says Bouarfa. Her contributions to the group helped shape the European guidelines that were published in 2019.

Bouarfa says that the COVID-19 pandemic dramatically impacted the way that pharmaceutical companies approach drug development and commercialisation: "2020 was an inflection point for artificial intelligence, similar to the year 1990 was for the internet." For OKRA. ai, the pandemic shifted commercial conversations from "what are the benefits?" to swift adoption and implementation. "COVID-19 has shown drug companies that you can run clinical trials in 10 months instead of 10 years," says Bouarfa. "From an adoption perspective, it has been a catalyst."

This year has been a busy year for the company. In January, OKRA.ai announced the extension of its partnership with US multinational pharmaceutical company Bristol Myers Squibb to support its commercial teams with insight and automation. OKRA.ai has also deployed its artificial intelligence models in a new development environment and studied the feasibility of expanding its pricing products into new markets including the US and Japan. OKRA.ai also achieved a 50:50 gender split across the company (which has a headcount of over 30) including within the engineering team, a rare feature for a technology company. "It's worth it even if it means interviewing 200 people for one role," says Bouarfa. She explains how the company is keen to create an environment where everyone can work together to create innovative solutions: "We want to safeguard our agile culture – that's our DNA and the key reason why we were able to innovate in a space where others failed."

Bouarfa uses a metaphor to explain the need to balance the company's creative and commercial goals: the park and the city. She says that the park is where the creativity happens and the city is where the business gets done; a company needs both.

When asked about leaders or entrepreneurs that inspire her, Bouarfa shows no hesitation: "Dame Stephanie Shirley. She started her software business from her dining table in the 60s with an all-women programming team." Having benefited personally from the example of Shirley, Bouarfa has some advice for the next generation of women leaders: "It's important for women to be part of the new revolution of AI and technology. It's also important to have women equally involved in creating the new systems that will make future decisions. It's important for our world. For all this to happen, it is absolutely necessary to have an inclusive and diverse culture. It is the core of innovation work itself. If the tech revolution yields positive results for women, it will be good for humankind, and that would be a true revolution, finally achieving justice for half the people of this planet."

•• It's important for women to be part of the new revolution of AI and technology. It's also important to have women equally involved in creating the new systems that will make future decisions. It's important for our world.

The impact of the challenging funding environment

Charles Claisse

Partner, Head of Corporate, Deloitte Legal

Whilst the funding environment has become increasingly challenging, there remain significant pools of capital available for investment from both venture funds and, in later-stage businesses, private equity. In addition, businesses are also able to look to venture debt from both banks and a variety of debt funds offering "venture debt".

Despite the challenging environment, we are not currently seeing the level of down rounds (i.e. lower valuations than on the last round) for later-stage businesses that might be expected – businesses are looking to avoid the negative implications of down rounds through flat rounds, extension rounds and other mechanisms including convertible debt.

Investors who are concerned about valuation are increasingly looking at how they structure liquidation preferences and whether any features beyond 1x return of money should be put into the capital structure to better capture risk and the cost of funds (indeed we have seen >1x preferences as being a mechanism to bridge differing valuation expectations, particularly to prevent a down round).

For early-stage businesses, the challenges in this environment are likely to feed more directly into a lower valuation but other terms are more standard – it is businesses at this stage that are typically having the most challenges raising capital but there are a number of tax incentives made available by the UK government that do support including R&D tax incentives and the ability to raise money using SEIS, EIS or fund VCT funds.



UK Technology Fast 50 Regional Winner

Wonde



SECOND PLACE OVERALL
SOUTH EAST REGIONAL WINNER
31.762% GROWTH

"It was down to an accident that the people that printed our exhibition signs did them double-sided. We could just flip them around and they all became Evouchers signs rather than Wonde signs," says Peter Dabrowa, CEO of the school data management platform Wonde.

Dabrowa is describing the successful launch of Wonde's sub-brand Evouchers to the US market via an edtech conference in New Orleans. A happy accident with the printing of signage meant the company could double down on its voucher proposition when it proved successful with representatives from US schools.

Since launching in 2015, Wonde's core proposition in the UK is its software which enables over 25,000 schools to manage, maintain and control their data and their relationships with third-party applications.

Its voucher proposition, Evouchers, was designed and built during the pandemic to help schools to identify children eligible for school meals and enable their parents to access supermarket vouchers during lockdowns, isolation or holidays. Evouchers' technology is built on the back of the existing Wonde infrastructure. It seems like vouchers will be the key to growth in the US and Australia – two new territories for the company. "Things evolve – you can go into new territories where you try new products and things aren't quite what you expect. So you have to pivot quite quickly to make it work," says Dabrowa.

In the last 12 months, Evouchers has started to work with housing associations in the UK to provide vouchers to tenants and is also working with local governments on projects to provide clothing to refugees. "The voucher piece alone could double in size quite easily, even in this country, there's scope to provide new solutions to customers," says Dabrowa.

With the launch of Evouchers and the acquisition of cyber security specialist Secure Schools in August 2022, Wonde is building out a portfolio of tech-enabled brands

To prepare for further growth and to support its international expansion, Wonde has been undergoing an internal restructuring to improve efficiencies and is launching a new unifying top company under which its portfolio of brands will sit. The reorganisation of the team is also needed to support the incredible growth in headcount the company has experienced. At the start of the pandemic, Wonde was around 30 people, now it has over 140 employees.

Dabrowa says "We've been asking ourselves how do we become more efficient? Instead of increasing headcount, we're thinking, how do we make processes better for us and our customers? Let's give the customers access to what they need, rather than making them come to us and ask for it."

Efficiency is particularly important for the company because, since February, it has shifted to a four-day work week. "It's helped massively with retention and hiring," says Dabrowa. He explains that the shift, though worthwhile, is not without challenges: "It's great for the employee. It's really important that they get a whole day back in their life to do whatever they want. The four-day working week also brought challenges as you can imagine. We've introduced some key working principles to help reiterate that we're doing four working days now, and that brings a commitment to manage time effectively, to work efficiently and focus each day you're in the office. And help achieve this, we have more accountability, more targets, and key project milestones."

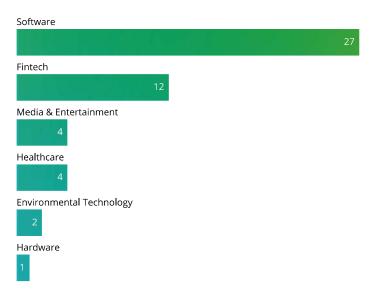
With further expansion in the US and Australia planned, alongside the restructuring of the company, the team at Wonde have plenty to fit into a short week, though it's clear they've not lost sight of how they got here. "We love creating products and things that are frictionless and easy for customers to onboard. And there isn't enough stuff out in the market, especially in the education sector, that help schools make their everyday life simpler" says Dabrowa.





Sector breakdown

Sector ranking for the Fast 50 companies (2022)



Software dominates the sector ranking for this year's Fast 50 companies. Over the last 25 years, the sector has transformed the tech industry by making it possible for companies to offer new products and services that were not possible before and to create them faster and more cheaply. In the famous words of US venture capitalist Marc Andressen "Software is eating the world". Fast 50 companies in this sector include Suffolk-based EO Charging, which develops software to support smart technology for electric vehicles, and London-based Cognism whose platform assists businesses in sourcing and ranking sales opportunities.

The fintech sector describes companies at the intersection of financial services and technology.

Companies in this area provide a wide range of innovative and tech-enabled ways of delivering traditional financial services such as payments, lending, investing, and money transfer. The UK has real strengths in financial technology, reflecting London's role as a major financial centre and the experience and expertise this creates in the economy. Layering this with the UK's strengths in technology, supported by world-class universities, creates an environment in which financial innovation can flourish.

Of course fintech can be found outside of London, for example Bristol-based LOQBOX which develops a suite of online financial tools for consumers, helping users to improve their credit ratings; and Railsr which develops an API that connects banks and fintech companies, facilitating the creation of new financial products and services.

While not as dominant as software and fintech, media and entertainment and healthcare, with four companies each, are also areas where the UK is historically strong. These are two sectors in which it is harder to scale companies, which is reflected in the lower population numbers. The environment for media and entertainment companies is increasingly volatile and companies in this area face significant competition as the barriers to entry are lowered by digital tools. Still, Fast 50 companies like Tripledot Studios are showing how creativity can be married with incredible financial performance.

Healthcare is also a challenging area as the sector is highly regulated. Wales-based Aparito, which develops mobile applications to deliver patient monitoring outside of the hospital, is showing how digital technologies can change the status quo.

UK Technology Fast 50 Regional Winner

Nonacus



THIRD PLACE OVERALL MIDLANDS WINNER 28,211% GROWTH

Nonacus co-founder and CEO Chris Sale plucks a purple-capped blood collection tube from his desk and holds up it so everyone can see. "We found many of our customers were just using standard purple top EDTA blood tubes. But the problem with these is that the cells break down... so we developed a specialist tube for stabilising the cells and preventing their degradation so that you can then extract the cell-free DNA, which is ultimately the magical material," he says with a smile.

Sale is describing some of the specialised products that Nonacus creates that allow its customers – university and hospital labs – to perform non-invasive testing for cancers and foetal abnormalities. In the industry, less invasive testing refers to the use of blood (minimally invasive), urine or saliva to screen for the genetic markers of disease. Such tests can replace often painful and invasive biopsies. Nonacus sells diagnostic kits for detecting a range of health issues including cancers, foetal abnormalities, genetic disorders, and viruses.

Sale and his co-founder Lee Silcock – the company's Chief Scientific Officer – both have significant experience in the genomic testing industry. They set up the Birminghambased company in 2015 when they noticed gaps in the non-invasive testing market that were not being supported. "Big companies were dipping their toes into the water but were not truly supporting market needs, and especially for new customers in the cell-free DNA testing market" says Sale.

The early team developed a full clinical workflow that laboratories and scientists could adopt to screen pregnant women for abnormalities in the foetus. In addition to the blood preservation tubes Sale described, the company's products include extraction kits that help clinicians to maximise the amount of cell-free DNA that is collected. "The pre-analytical steps are so crucial," says Sale "You have to have good input going in."

••So we developed a specialist tube for stabilising the cells and preventing their degradation so that you can then extract the cell-free DNA, which is ultimately the magical material.

Within a year and a half, the founders discovered that many of their orders were coming from cancer labs rather than labs focused on prenatal testing. "Naturally we listened to the customers and refocused," says Sale. The company began developing different workflows to support the screening of different cancers. The company also developed analytical technology to directly support the sequencing of DNA.

Much of the early work at the company was supported by a small amount of investment. "We've been set up on very, very slender investment compared to probably 98% of other companies in this sector. We were founded off of a £150k investment. Because we already had a plan of what R&D we wanted to undertake, we really had a focus on developing products with a clear advantage and getting them to market quickly."

The co-founders and their small team have worked hard to scale the company. There were certainly challenges along the way, recalls Sale. "Back in the day, I was doing payroll and marketing and procurement and accounting and sales and everything. Back then the scariest thing was, would I remember to pay everyone?"

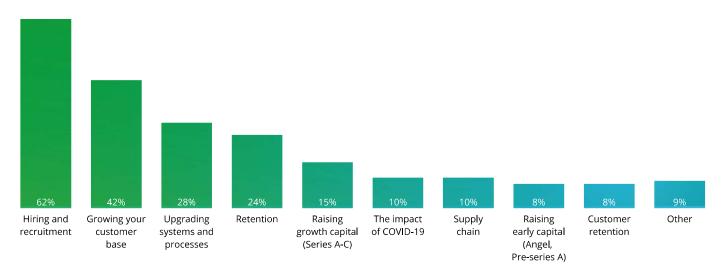
Since focussing their efforts on workflows for cancer, Sale says they have committed to investing around £20m of profits back into the company to support research and development. The company now employs over 50 people and reported turnover of £53.9m in its annual accounts for the year ending December 2021 with an operating profit of £33.9m.

Nonacus is now focused on international expansion: "We'll be expanding into Germany, Nordics, Benelux and certain key European countries where there's a huge diagnostic need and progressive healthcare systems. The company has just hired a Global Commercial Director to help lead the international expansion along with a Channel Manager to focus on direct sales into European markets and expanding the distribution network. Beyond Europe, the company is targeting Commonwealth countries and the US, with expansion into the country pencilled in for 2024.

Sale says that hiring the right team can be tough but that the company's mission to provide non-invasive and improved cancer testing methods helps: "What we're trying to try to achieve as a company is phenomenal and that clearly does touch a lot of our staff in terms of their interest to work for us."

Survey analysis

Most challenging aspects of growing and scaling the company



We interviewed CEOs, CFOs and other C-suite leaders from across the UK tech high growth ecosystem about challenges facing their business this year. How are they meeting these challenges?

Inflation is on the minds of many company leaders this year, with almost 60% of our survey respondents saying the rising cost of living is having an impact on their business.

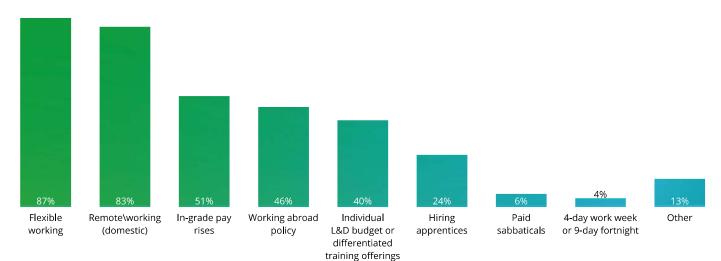
More than two thirds of companies have increased wages or given additional bonuses to help staff navigate rising costs. In addition, some have introduced the option for staff to be paid more frequently – weekly or fortnightly – to help with budgeting. Others mentioned giving one-off payments and sending a free heated blanket to all employees to help them manage the rising cost of energy.

Fintech firm ManyPets, which specialises in pet insurance, is one company that has taken a proactive approach to help staff manage the rising cost of living.

The London-based company, which has 614 staff, is offering all permanent employees with at least six months' service access to an interest-free loan of £250 to £3,000 to support them if they are facing short term financial strain. ManyPets is loaning the money directly, with staff repaying the money directly from their salary via payroll, across a period of up to 12 months.

"We appreciate that from time to time our team may need a little help with unexpected finances. We want to be able to provide them with support if this happens – whether it's used to pay for fixing a car, paying an unexpected bill, or clearing a lingering debt. We ensure the funds are accessed as quickly as possible," says Luisa Barile, chief financial officer at ManyPets.

Many respondents said the option for hybrid ways of working, with the ability to work from home as well as the office, is the benefit most valued by employees. An overwhelming 90% of companies are offering flexible working hours.



Benefits offered to attract and retain staff

Some, including tech firms Elvie and Wonde, have even implemented a four-day week or a nine-day fortnight to boost staff satisfaction. Both companies say the move away from the standard five-day week has been "incredibly popular" and effective for hiring and retention.

Meanwhile a fifth are giving staff the option to work from anywhere in the world. The option to work flexible hours away from an office gives staff the freedom to choose how they structure their day, and save on commuting costs and improve mental health.

Two thirds of survey respondents said they are struggling to hire talent, and 40% are struggling to retain talent, so the option for staff to work with flexibility is key to retaining staff. Companies are finding it particularly difficult to recruit software engineers, data scientists and sales people. One said it had raised its engineering salaries by 30%.

However, not all companies are sold on the idea of remote working. Around 2.5% of respondents said they do not offer the option for staff to work away from the office because they believe it does not encourage collaboration.

One of these is Bristol-based investment service Wealth Club. Alex Davies, founder of Wealth Club, said the company is 100% office based to make it easier to innovate and collaborate. He adds there is very low staff turnover, so he does not believe remote working is enough to retain staff alone.

"It is hard to train new people and retain your culture when running a business remotely. The vast majority of employees were very eager to return to the office after the COVID-19 pandemic. I believe the biggest benefit you can give your employees is control over their own destiny – don't over manage them and don't stand in their way.

"Make sure other people aren't standing in their way to stop them progressing. I want everyone in my business to feel like an owner of the business (rather than an employee) and in fact everyone who has been in the company for at least two years has share options in the business," says Alex.

While there is clearly no one right or wrong way to navigate the current economic climate, the UK Tech Fast 50 community continues to bring an agile approach to overcoming obstacles and managing unforeseen challenges. And one thing is clear, it's working. This year's cohort of Fast 50 businesses represent the tenacity and innovation of the UK tech sector with a collective average growth rate of 4,568% and total revenues in 2021/22 of £992 million, and collectively employ over 16,300 people in the UK.

Regional winners



Tripledot Studios, London

Tripledot Studios develops a range of casual mobile games including Woodoku and Solitaire. Since launching in 2017, the company has secured £149m in equity investment via four rounds, the most recent of which was used to acquire US-based Live Play Mobile.



Airtime Rewards, North West

Co-founders Adam Ward and Joshua Graham launched Airtime Rewards in 2014, developing a mobile rewards program for the retail industry that connects transactional data, brands and mobile networks. The Manchester-based company has raised £1.49m of equity investment across five rounds.



Wonde, South East

Wonde operates a cloud-based data management platform for schools, which allows them to control their school data and monitor those who have access to it. The edtech company made its first acquisition in August 2022, purchasing Secure Schools which develops an online tool to enhance cyber security in schools.



Amiqus, Scotland

Lawtech firm Amiqus develops software for anti-money laundering, identity and compliance checks. In June 2022, the Edinburgh-based firm announced a partnership with AMLify, an arm of the commercial law firm MacRoberts Group, to improve the company's anti-money laundering offering.



iamproperty, Yorkshire and North East

Proptech iamproperty offers estate agents auctioneering, conveyancing, compliance and moving services through its property auction company, iamsold. The Newcastlebased company acquired VTUK in March 2022.



Nonacus, Midlands

Established in 2015, Nonacus develops non-invasive diagnostic tools for the healthcare industry. Located in Birmingham, the company partnered with the University of Birmingham in July 2021 to develop a non-invasive test for bladder cancer from urine.



OnBuy.com, South West and Wales

Cas Paton founded OnBuy.com in 2016, an online marketplace for products across a range of categories including sports equipment, electronics and homewares. In February 2022, the company moved into its new offices in Bournemouth.

UK Technology Fast 50 Case Study

Elvie



TWENTY-FIRST PLACE OVERALL SECOND PLACE WOMEN IN LEADERSHIP 1,824% GROWTH

"I joined Elvie in September 2018, just in time to launch our breast pump in the UK. We launched the pump on the catwalk of London Fashion Week and got lots of positive publicity," says Aoife Zakaras-Nally, Chief Commercial Officer of Elvie, the femtech company disrupting the women's health space by developing, designing, and manufacturing connected technology for women.

Elvie was founded in 2013 by women's health expert Tania Boler, who teamed up with hardware entrepreneur Alexander Asseily who had previously co-founded wearable tech company Jawbone. The London-based tech company started with a pelvic floor trainer with an accompanying training app. It has since diversified into breast pumps and now sells its products online and via distributors in Europe, China, and the US.

Zakaras-Nally joined as Marketing Director before becoming CCO, so she understands the challenges that a growing business faces to get the word out about its products: "We were a startup with very little money. I came from a business with much deeper pockets. So we needed to find ways to be really creative to get our name out there. The catwalk move meant we got a ton of press coverage both here and in the US."

The catwalk launch helped boost Elvie to success when it launched in the US: "We launched in the US in February 2019 with 25,000 women on a waitlist to get our product," says Zakaras-Nally. Elvie's success helped it to secure a \$42m fundraising deal in April of that year from investors including Octopus Ventures and Impact Ventures UK.

Zakaras-Nally explains that Elvie's team built on the success of the breast pump and insights from users to launch new products during 2020: "We launched Elvie Curve and Elvie Catch, and that was from the insight that women's boobs were leaking on one side while they were pumping on the other. They have been very successful products for us. It allows us to get Elvie into the hands of women who maybe couldn't have afforded our flagship product." In 2021, the company launched its hands-free breast pump – the Elvie Stride – in the US. The US is a big focus for the company as it accounts for around half of the global market for breast pumps. In July 2021, Elvie raised £58m from investors including BGF and BlackRock to invest in further research and development and to support expansion in new and existing markets. In 2022, the company launched the Elvie Stride in Europe. "That's opened us up to a wider segment of mums," says Zakaras-Nally.

While Elvie has been growing in leaps and bounds and impressing investors, it has faced challenges in the past because of its focus on technology for women. "Series A was really difficult to be completely honest because at that point femtech was just a non-entity, it didn't exist," explains Zakaras-Nally. "We just had door after door shut on us. It was a niche industry, despite the fact that it's 50% of the population. Investors really struggled to talk about female bodies." Talking about Tania Boler's role as founder, Zakaras-Nally explains that focusing on education and dialogue has always been important, particularly in the beginning. "Tania's quest basically was to normalise the conversation," says Zakaras-Nally.

The nature of the challenges the company faces have changed as it has grown. Zakaras-Nally says that the pandemic derailed plans for Elvie's European expansion. Now supply issues are exerting pressure on the company: "Our products are incredibly complex. Some of the components in our pumps have nine-month lead times," says Zakaras-Nally. She says that these sorts of challenges are part of being a startup. "It does make you incredibly resilient."

When asked about what is next for Elvie, Zakaras-Nally explains that the company is quite secretive about its upcoming innovations but that it remains dedicated to creating technology that helps women. "We are looking to do more products within our existing focus, which is postpartum mum and baby – but also starting to go further into other parts of women's lives... The hands-free pump has definitely been the product that put us on the map. But there will be more."

66 Series A was really difficult to be completely honest because at that point femtech was just a non-entity, it didn't exist [...] Tania's quest basically was to normalise the conversation.

Training for growth

Ayman Omar

Head of Partnerships, Commercial and Sales Academy, Multiverse

multiverse

••The unifying factor of those that do is a laser-focus on two areas. Firstly, on people: recruitment, development and retention. Secondly, on skills: building the technical capabilities that are needed to succeed today and in the future.

Most businesses don't succeed in scaling.

The unifying factor of those that do is a laserfocus on two areas. Firstly, on people: recruitment, development and retention. Secondly, on skills: building the technical capabilities that are needed to succeed today and in the future.

The good news is that these two foci – people and skills – intersect. Developing skills means developing people: contributing not just to business capabilities, but also to building a diverse and talented workforce.

Companies are searching for a mechanism to deliver skills that are relevant, up-to-date, and ready for application in the workplace. There's a name for this already: the apprenticeship.

Apprenticeships are often viewed as an alternative to university for school leavers taking their first step into a career. For this function, they are brilliant. Apprenticeships open up access to top careers for young people that simply aren't being reached through traditional grad schemes. The numbers speak for themselves: 41% of the apprentices we place meet an indicator of socioeconomic disadvantage; 23% are Asian heritage; 21% are Black; 52% are women – groups that are typically underrepresented in tech. Apprenticeships are developing a cohort of future leaders that truly reflects the country at large.

It's a no-brainer for companies like Student Beans, which launched a drive for apprentices in a bid to grow its tech teams by a third. They're making an investment that doesn't just solve the business challenges of today but creates a lasting legacy of talent.

But apprenticeships are not just for young people. One shot of learning at the start of a career is not enough to meet the demands of the future. Apprenticeships offer lifelong learning for established professionals.

We offer programmes for career development. For those that use data in their role (which is surely now the majority of us), we offer a Data Literacy programme to fill those gaps that schooling and university may have left behind. For those who find the direction of their career changing, we offer programmes that enable reskilling in areas like Data Analytics or Software Engineering.

The impact is immediate. The charity Anthony Nolan was driven to develop its data maturity and used our Data Literacy programme and our degree-level Advanced Data Fellowship – driving both knowledge and agility across functions.

Skills development is vital to growth – and it's accessible through apprenticeships.

In partnership with Deloitte, Multiverse is facilitating the funding to support several hundred apprenticeships, through levy donations from big organisations towards startups and SMEs.

Through this funding, a growing business can launch an entry-level apprenticeship programme, attracting new talent from diverse backgrounds into the business. Or, they can plug skills gaps by developing people already in the business – whether it's enrolling a marketing professional on our Digital Marketing course to expand into Google Ads; or a business leader on our Data Fellowship so they can make data-driven decisions based on the trends.

What it comes down to is thinking ahead, to overcome the odds when it comes to growth. It's about investing in people and skills and laying the foundations for scale from the start.

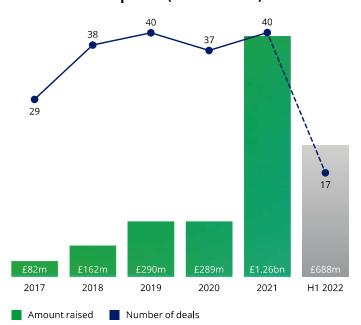
As a sponsor of the Deloitte Fast50, Multiverse is offering fully funded professional development opportunities to all entrants of this year's awards. If you recognise these challenges and want to explore how apprenticeships can help, the easiest way to start is to reach out to Kariel Parian from Deloitte Private (kparian@deloitte.co.uk).

Horizon Scanning



Investment and exits

Value and number of equity investments into the 2022 Fast 50 companies (2017-H1 2022)



••The biggest risk for tech companies would be to completely stop investing in innovation, R&D and growth...

To put themselves in a position to reach profitability and achieve better margins, they need to make sure they are prioritising sustainable growth.

Sophie Winwood, Investment Principal, Anthemis Group For many high-growth companies, equity investment is a crucial ingredient to help them grow and scale. Equity investors are driven by the potential for high returns and the opportunity to be involved in a company from the ground up. The chart on this page shows the role that equity investment has played in the growth journey of this year's Fast 50 over the last five years.

The companies secured an impressive £1.26b last year. Although the number of deals completed in 2021 was the same as in 2019 the amount of equity investment secured in 2021 was over seven times that raised in 2019. This speaks to the growth journey that this year's Fast 50 are on; they are becoming increasingly attractive investment opportunities.

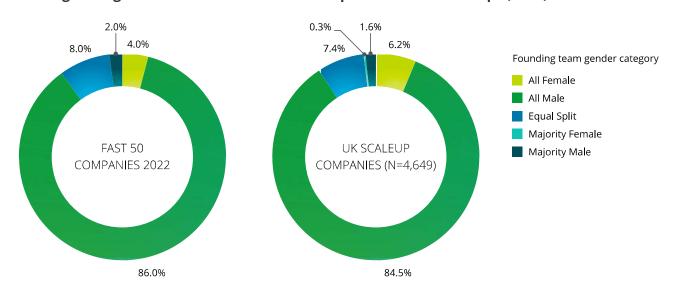
Of course, 2021 was an unusual year for investment for the UK's private markets. The COVID-19 pandemic resulted in the creation of new business models suited to unprecedented times which attracted investors seeking tech-driven growth amid the uncertainty.

The investment environment is different in 2022. The first half saw the Fast 50 raise a significant £688m from funders including Equity Gap, Seedrs, and Octopus Ventures. This speaks partially to the resilience of fast-growing UK tech companies – they can progress even in times of economic uncertainty.

Looking forward to 2023, it is unlikely that the UK's private markets will witness the same level of overall investment as it has over the last two years. However, funds have raised significant capital during 2021 and 2022 and will continue to deploy capital to growing companies with innovative ideas such as the Fast 50.

Gender diversity

Founding team gender breakdowns: Fast 50 companies and UK scaleups (2022)



There are many reasons why gender diversity among founding teams is important for the UK's high-growth economy. A key reason is that it can help to create more balanced and effective teams. When there is a mix of genders on a team, different perspectives and ideas can be brought to the table, which can lead to more successful outcomes.

There is a significant opportunity to see more balance among the gender breakdown of Fast 50 company founding teams. This is also true of the UK's wider high-growth population. As the charts show, a significant majority of the Fast 50 companies have all-male founding teams.

This aligns with the UK's population of scaleups (companies that have grown an average of 20% year-on-year over three years) based on data from Beauhurst.

The Alison Rose Review of Female Entrepreneurship was published in 2019 and found that only one in three UK entrepreneurs is female. The review also found that women are less likely than men to start businesses and that businesses owned by women are less likely to grow and scale. The review made many recommendations to increase female entrepreneurship in the UK, including increasing access to finance, networks, sponsorship, mentorship, and role models.

Aoife Zakaras-Nally, Chief Commercial Officer of femtech company Elvie, highlighted in her interview how the company initially faced difficulty accessing finance because it was creating technology for women. "Series A was really difficult to be completely honest because at that point femtech was just a non-entity, it didn't exist," explains Zakaras-Nally. "We just had door after door shut on us. It was a niche industry, despite the fact that it's 50% of the population. Investors really struggled to talk about female bodies."

Part of the rationale for the new Fast 50 Women in Leadership category is to elevate the incredible success stories of companies that have a woman CEO or a founding team of at least 50% women. Hopefully, by providing a platform for women in technology and entrepreneurship, we can help to change the gender diversity of future cohorts of Fast 50 companies.

Loubna Bouarfa, founder and CEO of OKRA.ai and inaugural winner of the Fast 50 Women in Leadership category, says in her interview: "It's important for women to be part of the new revolution of AI and technology. It's also important to have women equally involved in creating the new systems that will make future decisions. It's important for our world. For all this to happen, it is absolutely necessary to have an inclusive and diverse culture. It is the core of innovation work itself."

66 I don't buy into the notion that there are not enough diverse candidates in the market. If a recruiter doesn't send us a diverse range of candidates for a role we are hiring for, we won't work with them.

Ylva Oertengren, Chief Operating Officer, Simply



What are the key tax issues for CFOs at VC-backed companies?

Paul Clay

Partner, Tax, Deloitte LLP

International workforce

We know fast-growing VC-backed businesses care deeply about their culture and people, and flexible working can help increase employee engagement, as well as attract and retain top talent. Share schemes are another valuable incentive, and you may be looking to introduce plans more widely across your team. If these are part of your growth strategy, there are a few things to keep in mind.

Geographically mobile employees

Having a geographically mobile workforce can incentivise employees and help build global brand awareness and an international client base. However, there are corporate tax risks and payroll obligations when people work cross border.

For example, inadvertently establishing an overseas branch or putting undue pressure on tax residence status can lead to more operational and administrative complexity, compliance costs, tax risks and in extreme cases, litigation.

There are safeguards, such as introducing a remote working policy to restrict the duration and types of activities performed overseas. But the level of protection this affords can depend on the work involved, the relevant tax authority, and any double tax treaty that may be available. We recommend businesses understand the risks, recognise the uncertainties and adopt a case-by-case approach.

Incentives for overseas employees

Care is needed when awarding share incentives to employees in new jurisdictions, and it's worth seeking tax and legal advice at the earliest opportunity to make sure local requirements are met. Often overseas tax rules can be very different to your local jurisdiction, and approaching the grant of (even unapproved) options to overseas employees can result in a myriad of issues, which can be highlighted upon any due diligence.

For example, unless options granted to US-based employees are appropriately structured, this can result in annual, and additional tax charges for the US employees, as well as complications for the employer. These issues can include the need to grant at a certain market value, obtain valuation reports and/or have specific clauses included regarding timeframes for the exercise and/or sale of the underlying shares.

Using 'employers of record' for overseas offices

More companies are using employers of record – independent third parties that hire people and run payrolls – in new jurisdictions. While this can offer greater flexibility and enable faster expansion, there can be complications:

- tax-advantaged employee share awards may not be available
- share plan rules, such as leaver provisions, need to be tailored to acknowledge participants are not group employees

- additional tax considerations can require very clear communication to make sure the employer of record operates the payroll with respect to the share awards, when required
- in the worst case, the granting of options to nonemployees of the group (which in theory is the situation for the individuals on the books of the employer of record) could invalidate the entire option scheme, resulting in a number of adverse tax consequences for the group and its employees

As participants are not group employees, the legal and regulatory position will need careful review.

UK investment incentives

We are seeing rapid change, especially across the key incentive areas listed below. This will require planning to ensure reliefs are optimised for businesses.

R&D

After HMRC's consultation on the R&D regime, the following will start to be introduced from 2023:

- the inclusion of cloud and data costs in R&D claims
- the exclusion of overseas costs from UK claims (with some exceptions)
- pure mathematic activities will qualify
- changes around compliance to tackle abuse.
 These include 100 new HMRC inspectors to review claims, R&D claimants being required to name advisors, and needing a senior officer to sign off R&D claims

Further changes are expected in the Autumn Budget on 17th November 2022.

Capital relief

The super deduction regime offering 130% relief on capital expenditure is now in force and in the Spring Budget, further changes were announced that may come in for capital spend.

These include:

- raising the Annual Investment Allowance to £500,000
- increasing Writing Down Allowances from 18% and 6% to 20% and 8%
- introducing First Year Allowances and full expensing so businesses can write off the costs of qualifying investments in one go

Patent Box

With the grandfathering of the old Patent Box regime coming to an end, companies are required to use the Nexus approach plus track and trace to claim the relief. In addition, with corporation tax rising to 25% in 2023, the benefit of Patent Box will increase from 9% to 15%.

Grants

The Government is announcing new UK grant funding for companies across all sectors, with a significant focus on sustainability and the race to net zero.

Global digital tax regimes

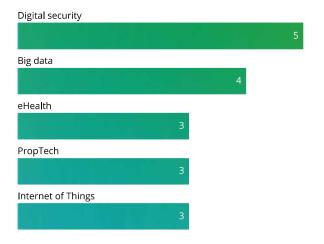
There has been a fundamental shift in the international tax landscape. The "user base" concept is increasingly being considered a key indicator of value-driving activity for tech businesses, alongside more traditional incorporation, "bricks and mortar" and "feet on the ground" reference points.

The OECD is continuing its work on addressing tax challenges associated with an increasingly digitalised economy, including international design and implementation of the Pillar 1 and 2 solution. Many countries, however, have taken unilateral steps to self-allocate taxing rights based on local user interaction. This brings businesses into the scope of new direct and indirect tax obligations across the world, creating huge complexities in assessing exposure and maintaining compliance.

The Deloitte Tax Atlas provides a global overview of these regimes. We would also be pleased to discuss any of these tax and legal requirements with you.

Emerging technologies

Emerging technologies ranking for the Fast 50 companies (2022)



Emerging technologies are those that are still developing and are not yet widely commercialised. Such innovations are important because they have the potential to change the way we live and work by driving productivity and increasing standards of living. The chart on this page breaks down the top emerging technologies employed by this year's Fast 50.

Companies are increasingly being targeted by cybercriminals and state actors, who are using sophisticated methods to disrupt operations, divert capital, and steal data. As digital technologies enable so many companies to reach new heights of productivity and profitability, they are also creating vulnerabilities that can be exploited. In such an environment it makes sense that we're seeing the rise of digital security as an emerging technology. Fast 50 companies in this category include Panaseer which has developed software to assist businesses in producing and analysing metrics to understand the security of their data. London-based Xydus which has developed facial recognition software for user authentication of digital accounts, used by customers such as Adobe and Vodafone.

Big data deals with the storage, manipulation, and analysis of data that is too large or complex to be processed using traditional data processing methods. As our digital environment creates more and more data, big data tools can provide organisations with insights that they would not be able to obtain from smaller data sets. Often companies use such tools to streamline operations or better understand the diverse needs of customers. Fast 50 companies in this area include Cambridge-based OKRA.ai which develops machine learning software to enhance the speed of data analysis for life sciences customers and offers insights and predictions. And there's London-headquartered Pupil which develops software that reconstructs 3D, real-world spaces digitally using massive datasets and machine learning.

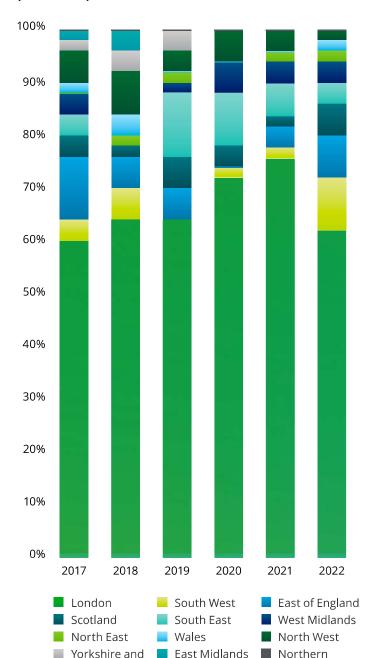
A thread that links together the emerging technology areas for the Fast 50 companies is the sophisticated use of data. It provides the raw input that these technologies rely on to function. We will undoubtedly see Fast 50 companies making increasingly innovative use of data in the future.

66 I'm a big believer in the intersection of markets.
For example, tech and bio, tech and finance, research and technology – generative AI is an example. This is something the UK excels at, and in particular London, which is a melting pot of great ideas and people.

Hussein Kanji, Partner, Hoxton Ventures

Location trends

Regional breakdown of the Fast 50 cohorts (2017-2022)



Ireland

Economic diversity is strongly linked with prosperity. When an economy is diversified, it is better able to weather economic downturns and periods of slow growth. A diversified economy is more resilient to shocks, be they economic or viral. Examining the regional distribution of the Fast 50 companies is informative because while London-centric, it shows that growth is possible across the country.

As the last five years show, companies in London dominate the Fast 50. The high number of companies in the South of the country reflects the population density – and therefore access to tech talent – as well as the availability of capital and access to facilities such as accelerators and lab space.

This year's cohort has a lower proportion of London-based companies than the last four years. Many of the companies in this year's cohort have found innovative ways to grow that were catalysed by the pandemic, potentially helping to increase the proportion of companies based outside of the Capital. Another aspect that may be encouraging this shift is the move to remote and hybrid working styles. Companies can now tap talent across the UK – and the world – benefitting from skilled workers wherever they may be located. Offering hybrid or remote working can be a way to boost employee retention and also keep down operating costs. Such shifts may help to disperse the economic benefits of fast-growing company populations across the UK.

The Humber

25 Years of Fast 50



25 successful years

Paul Lee

UK Partner and the Global Head of Research for the technology, media, and telecommunications industry at Deloitte

In 1998, the UK technology scene was in a state of flux. The internet was nascent but growing with 9% of households having an internet connection. Consultants turned entrepreneurs Martha Lane Fox and Brent Hoberman launched lastminute.com to sell discounted flights, theatre tickets and hotel bookings. Semiconductor design ARM had listed on the London Stock Exchange and the NASDAQ. In a world first, a professor at the University of Reading had a radio frequency identification or RFID tag implanted under his skin.

Also in 1998, the Deloitte Fast 50 was published for the first time. The growth league table dedicated to the UK's fastest-growing companies launched with games producer Eidos plc in the number one spot. Founded in 1990, the listed company had grown via acquisition and harnessing the success of titles such as Tomb Raider.

Since the inaugural list, the Fast 50 has been published annually and has become a key barometer of the health of the UK technology sector, and a showcase for the country's most innovative and successful tech companies. Many of the companies that have featured among the Fast 50 are household names or are some of the most innovative companies in the world. They include stalwarts and household names such as racing team and car manufacturer McLaren, life sciences research tool supplier Abcam, DVD and streaming provider LoveFilm, flight booking site Skyscanner, and online marketplace Notonthehighstreet.com.

Over time, the composition of the Fast 50 has naturally reflected the most successful technologies and business models in the UK ecosystem. When the Fast 50 launched in 1998, software companies were already a dominant force on the list. The dot-com boom of the late 1990s saw internet-based companies ascend to insane highs only to come crashing down throughout the early 2000s. Assumptions about the speed at which the internet would transform the world proved to be unrealistic and many businesses had poor fundamentals and ran out of capital.

However, the Fast 50 shows that internet-based service providers rose to prominence during the early 2000s; those with viable business models were able to emerge from the ashes of the dot-com crash and grow rapidly. Hotel reservation service Active Hotel took the top spot in 2003, Lastminute.com ranked first the following year. Consumer computing and internet use was beginning to take off.

The internet began to change from the static web of the late 1990s and early 2000s as platforms like Facebook and Twitter rose to prominence. These platforms allowed people to connect with each other and share information in real-time – a major shift from how most people had used the internet up until that point. The appearance of companies like the online game site Miniclip – ranked fifth in 2007 – reflect how the consumer experience of the internet was changing.

Another important step in the evolution of the internet for consumers was the launch of the first Apple iPhone mobile device in 2007. In the early 2000s, smartphones were a rarity, used only by a small number of businesspeople and tech-savvy consumers. But adoption throughout the decade saw them become ubiquitous, with millions of people using smartphones to stay connected to the internet and each other. The shift towards mobile helped propel companies like Mobile Interactive Group through the financial crisis and to the top of the Fast 50 in 2010. It provided mobile commerce and marketing solutions to brands around the world and was acquired the following year by Irish rival Velti.

Widespread use of smartphones also allowed the sharing economy of the 2010s to flourish. The term refers to the emergence of a new way for people to access goods and services. Companies like Airbnb and Uber were possible because smartphones allowed people to easily connect with each other and share resources. Smartphones also gave publishers the opportunity to sell digital advertising and target individual consumers more accurately, propelling companies like video ad platform Unruly Media into second place on the Fast 50 list in 2012, programmatic ad buyer Infectious Media to the top spot in 2013, and social media tool provider Brandwatch to number 20 in 2014.

The increasing range of jobs we do on the internet, both as consumers and professionals, has helped drive success in the UK's financial technology or fintech sector in recent years. The UK has long had strengths in financial services but technology has supercharged the sector, increasing the reach and impact of financial innovations.

The Fast 50 saw digital payment provider GoCardless rank second in 2016, its peer Checkout.com ranked second in 2018, challenger banks Revolut and Oak North were first and second respectively in 2019, and the top company in 2021 was ClearBank, which provides financial institutions with digital infrastructure to support their operations.

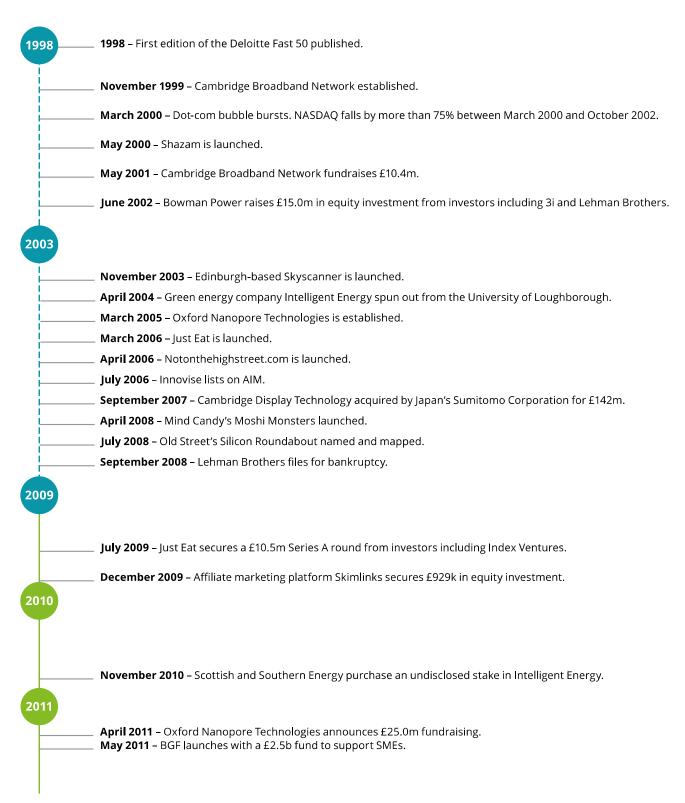
A crucial trend over the last few years of the Fast 50 has been the rise of companies utilising artificial intelligence and machine learning. This is set to be one of the most transformative technological developments of our time. With the ability to learn and improve on their own, these technologies are already starting to have a profound impact on a wide range of industries, from healthcare and finance to manufacturing, transportation, and cyber security.

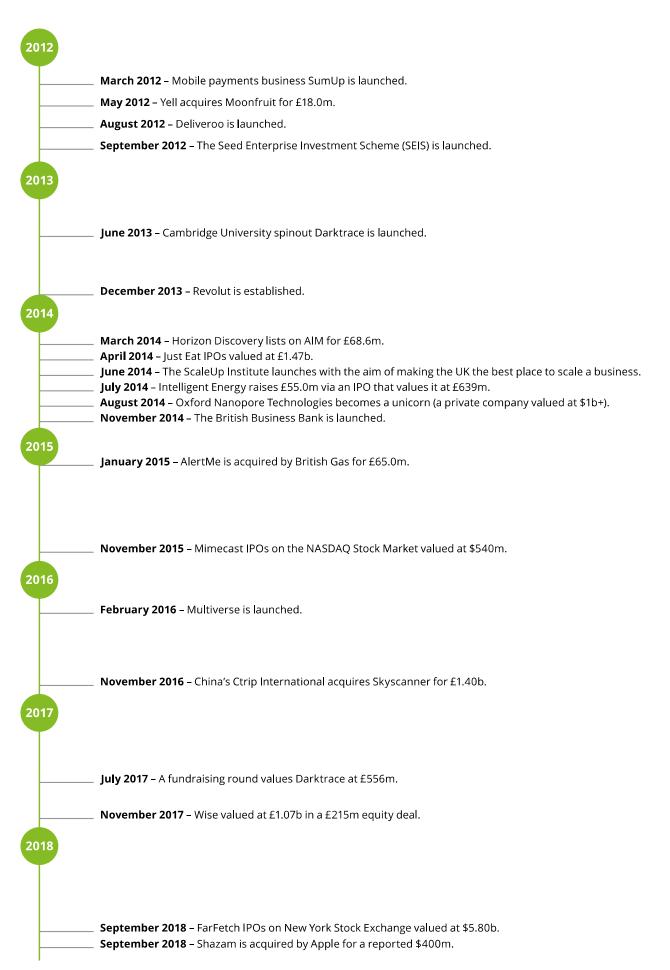
An example of a company innovating in this last area is cyber security firm Tessian. The London-based company is utilising machine learning technology to help organisations to keep their email secure by learning patterns of behaviour and flagging suspicious or unusual activity such as phishing scams or misdirected emails.

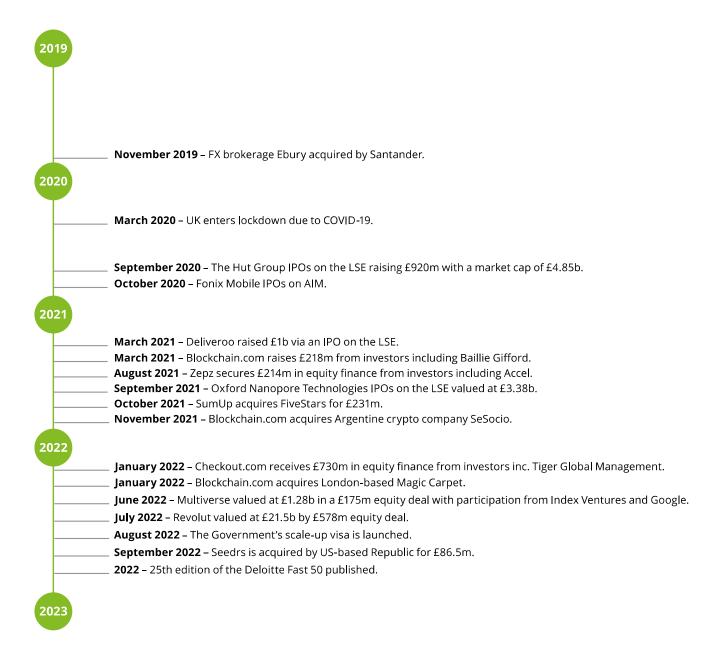
Al and machine learning are still in their early stages, but it is clear that they have the potential to revolutionise the way we live and work. The last 25 years of the Fast 50 have shown the tremendous speed at which technologies can change the status quo. This year's Fast 50 provide a glimpse of what the next 25 years might hold.



Timeline







Where are they now?

The Fast 50 has been celebrating some of the UK's most successful fast-growing companies for the past 25 years. From digital money transfer systems to Al-powered cyber security companies – many have become thriving international businesses. Here is a look at the journey some of these companies have been on and where they are today.

The Fast 50 has pioneers in cleantech such as Intelligent Energy. Established in 2004, It develops low-carbon fuel cell systems to use in consumer electronics and power industries. It ranked 33 on the Fast 50 list in 2012. It has continued to expand its green energy model in Japan, South Korea, and China. In May 2022, BMW Leipzig announced it was using Intelligent Energy's products to power its factory; in October energy giant Shell announced it will be using the company's fuel cells for its pipeline inspection.

Aside from cleantech, the Fast 50 has tracked leading biotechnology companies such as Oxford Nanopore Technologies. Established in 2005, the University of Oxford spinout develops nanopore sequencing products to improve DNA and RNA testing. In August 2014, the company raised £35m from investors including IP Group in a deal that valued the company at over \$1b and marking the company as a unicorn (a private company valued at over \$1b). Oxford Nanopore listed on the London Stock Exchange in September 2021 with an impressive valuation of £3.38b, raising £350m.

Online marketplaces were considered to be a nascent industry in the 2000s. Picture this, it is 2006 and you want to buy a gift for a loved one – where do you go? Your first point of call is most likely a shopping centre. Two women, Holly Tucker and Sophie Cornish, decided to change this narrative.

In 2006, they launched Notonthehighstreet.com, a digital marketplace where customers could purchase authentic, artisanal, and niche products. It gained its competitive edge by giving exposure to small businesses. The London-headquartered company made three appearances on the Fast 50 (2011, 2013 and 2014).

Another challenge in the 2000s was sending money abroad to family members - it could only be achieved by visiting a local transfer agent. This was expensive and unaffordable for many. Frustrated by this, Somalian refugee Ismail Ahmed launched London-based Zepz (formerly World Remit) in 2009. Zepz is a digital crossborder payments platform and its business model disrupted the traditional means of sending money abroad. At the time of its inception, Western Union and MoneyGram dominated the sector with very little digital presence. A decade ago, online payment platforms like Zepz were nascent and their potential was unknown. Fast forward 10 years and Zepz claimed the top spot in Deloitte's Fast 50 2015. Since its establishment, it has received £497m in equity investment from investors including LeapFrog Ventures, Accel, and Farallon Capital Management. It now has a digital presence in over 130 countries and continues to invest and partner with African countries – most recently Uganda's DFCU bank in February 2022.

In 2013, Bloom & Wild founders Aron Gelbard and Ben Stanway started measuring the size of UK letterboxes – why? They wanted to provide an online flower service that customers could rely on. Bloom & Wild customers now receive flowers through their letterbox – guaranteeing delivery – even when no one is home. Its customer-driven approach in conjunction with it use of technology, earned it second place on the Fast 50 list in 2017.

Another recent e-commerce success story is Motorway, which operates a marketplace for private car sellers. Launched in 2016, the London-based company strives to make the selling process as fast and efficient as possible. It reached unicorn status in 2021 after a £143m fundraising round and ranked 30 in Deloitte's Fast 50 in 2021.

Similar to Motorway, Cazoo operates an online marketplace for used cars. Established in 2018 by Alex Chesterman OBE (founder of LoveFilm and Zoopla), Cazoo secured £445m in equity investment via six rounds. The company was named a rising star in Deloitte's Fast 50 in 2020 and by August 2021, it was listed on the NYSE via a SPAC merger with Ajax. Continuing with its expansion into Europe, Cazoo launched in Spain and Italy in 2022.

The last 25 years have seen the creation of many versatile high-growth companies. Deloitte's Fast 50 has showcased some of the most exhilarating, dynamic, and innovative companies to enter the tech sector.



Fast Futures: Levelling Up, Tech, and Finance



Levelling up

Fast 50 cohorts by proportion of companies headquartered in London (1998-2022)



The concept of "levelling up" means different things to different people. To the Government – who can take credit for popularising the term – levelling up is "about growing the economic pie, everywhere and for everyone, not reslicing it." But the Government also calls it a "contemporary Medici model, our twenty-first century recipe for a new Industrial Revolution" – an unlikely reference redolent of the minister who oversaw the whitepaper.

But the levelling up agenda has resonance outside of Government too. It's not just that levelling up presents direct opportunities for private companies (contracts, delivery partnerships), but because the idea also appeals to companies and business leaders in a broader sense. As businesses become more aware of their ability – and responsibility – to be agents for good, one way in which they can seek to exercise that ability is by ensuring that regional inequalities in the UK decrease rather than increase.

Sometimes private companies' contributions to levelling up don't even need to be that altruistic. Hiring outside of London can be better value. Taking on office space outside of London can be better value. Setting up business infrastructure outside of London can be better value.

It is pleasing then to see that this year's Fast 50 cohort is the first to see a falling proportion of companies headquartered in London since 2016. And indeed many of the London-based companies in this year's Fast 50 (and in previous years) have offices outside London as well. Perhaps most impressively, this year six of the top 10 companies are headquartered outside of London.

A big part of the levelling up agenda – at least as articulated by the Government – is about jobs and opportunities.

As the whitepaper puts it: [it's] "critical that we improve productivity, boost economic growth, encourage innovation, [and] create good jobs." But it also adds that "Levelling up skills, health, education and wellbeing would deliver similarly-sized benefits."

What's striking about this year's Fast 50 is not only that those headquartered or with offices outside of London will be directly economically contributing to the levelling up cause, but that many of the companies (regardless of location) are creating and developing products and services that help the cause too.

The numerous biotech and healthcare companies on the list are helping to improve lifespans, which in turn helps levelling up. Educational and edtech businesses on the list are helping to improve skills, which in turn help levelling up. The fintech companies on the list are helping to improve access to financial services, which in turn helps levelling up.

As political support for levelling up can wax and wane, it's brightening to think that some of its goals may still be achieved through the hard work and ingenuity of the UK's entrepreneurs.



Three characteristics of a successful growth journey in technology

Andy Gregory

CEO, BGF



••Time is of the essence with technology. If you are slow to market, you may find someone else has got there first.

Of all the sectors BGF invests in, technology accounts for the largest single share – well over 100 out of a total of more than 500 companies backed. These tech businesses are a diverse group, solving a variety of problems. In my time overseeing investments at BGF, there have been a few clear themes among those that have navigated a successful growth journey.

The first is that they are alive to the transformative potential of equity funding. We've seen numerous good companies set up and built using a classic bootstrapping model, i.e. they use savings and loans from friends and grow organically while keeping costs to a minimum. What turns them into great companies is that they seek out investment to accelerate that growth. One example out of many would be cloud services provider HeleCloud, which we backed from 2018 until its exit last year to Swiss multinational SoftwareONE. Founder Dob Todorov says he achieved in four years what it would have taken 15 years to do without our support.

That's a story that has been repeated time and again across our portfolio. And I would argue it's a story that is particularly pertinent to technology entrepreneurs, who operate in such a fast-moving sector. Time is of the essence with technology. If you are slow to market, you may find someone else has got there first.

A second quality that successful technology leaders share is a willingness to take advice. Even the most plugged-in technology entrepreneur will admit it's hard to stay on top of every new trend. Yet it's crucial for a growing business to understand its place in the market, its competitors and the needs of its customers. We find that this kind of objective view or sounding board is often well delivered by a non-executive, ideally someone with extensive relevant experience who can share the fruits of this experience with the management team.

Introducing experienced non-execs to portfolio businesses is a key part of what we do at BGF. Over 400 appointments have been made to company boards with our help. I could point to many in the technology sector, but one example would be Irish cybersecurity business Edgescan, which appointed former senior IBM executive Bernie Waldron as non-executive chair, bringing a wealth of industry experience to help guide the company's strategy.

Finally, I would say that a successful growth journey depends on ambition. The kinds of businesses we work with – and which are successful in securing funding from us - have big ambitions (backed up with evidence and credentials). How that ambition manifests itself varies, but one example is growth by acquisition. Technology companies are often well positioned to grow rapidly by acquiring other companies in their sector. One example is Miss Group, a web hosting provider that we began supporting in 2018. The company made seven acquisitions while we were a shareholder. Indeed, it grew so fast that in this instance we exited our investment about 18 months after signing the initial cheque, at a 100% internal rate of return. BGF is a long-term investor, meaning we can partner with companies over many years, but when I talk about equity investment accelerating growth, this is the kind of speed that is possible.

As I mentioned, the technology companies in our portfolio are a diverse group. They include app developers such as Dundee-based Waracle, autonomous vehicle businesses such as Oxford-based Oxbotica, and payment infrastructure businesses such as London-based Paddle, which recently achieved 'unicorn' status with a valuation of over \$1b. Technology remains an incredibly exciting sector and we are looking forward to backing many more innovative tech businesses in the years ahead.



The importance of differentiation in tough times

Chris Graves

Partner, FA – Advisory Corporate Finance

With European venture capital investment down >30% in Q3 2022 and the Bank of England noting that it believes the UK is already in recession, it is more important than ever for fast-growing companies to present investors with clear differentiation, evidence of downturn resilience and clear unit economics and a route to profitability.

However, funds have significant amounts of dry powder to invest and with an increase in SEIS limits being one of the few policies announced in the "mini" budget to survive, companies who can show a balance between high growth potential and realism around economic headwinds will continue to be able to access capital. Sector focus will be important for investors, with a clear shift away from consumer already in evidence and software continuing to account for a large proportion of funds raised. But each downturn is different and there are already signs that traditionally cyclical segments such as media and marketing technology may prove resilient in 2022-3, fuelled by the ongoing pandemic bounceback in entertainment, a boom in content and learnings from 2020 where budgets were cut too far too fast.

Investment in high-growth tech companies in the UK continues to be underpinned by a robust exit environment, with the UK and Ireland accounting for 50% of exits by value in Q3. The weakness of sterling will continue to make UK assets good value for international acquirers, while the country's strength in the active software and biotech verticals will also underpin a steady volume of exits. Companies with very clear competitive positioning in structurally fast-growing and resilient markets will be most attractive to trade or PE acquirers amidst economic turbulence, with disruptive business models well placed to grow regardless of macro conditions.



Tax as an enabler

Willo Renehan

Partner, Deloitte Private Tax

Often tax is seen as a compliance burden, a cost, something which a company is forced to address when instead it would rather be applying scarce resources to running the business.

But what if tax can be used to drive business efficiency, help create shareholder value, make it easier to contract with your customers, and be a driver for growth? How can this be achieved? Set out below are some ideas across six key growth areas for any startup or scaleup business.

1. Intellectual property

Central ownership and management of IP is not just good for value creation, it can also assist with R&D claims, as well as using the Patent Box to reduce corporation tax. One of the keys here is to ensure that upon diligence, there is clarity as to how the IP has been developed, who owns it, and how the owner is exploiting the IP.

2. Supply chain

Minimising costs such as customs duty, VAT and withholding taxes in getting your offerings to market. Even in the case of businesses offering services, costs and delays can be incurred on going to market where the supply chain has not been designed appropriately and is understood across the business.

3. Internationalisation

Consider how to establish overseas operations to best meet commercial objectives whilst reducing costs. It is important that overseas activities do not take up a disproportionate amount of management time whilst allowing the group to expand in target markets.

4. Funding

Efficiently raising funds, and getting those funds to where they are needed, whilst managing foreign exchange, tax costs and foreign controls.

5. Employee reward

Incentivising your employees in a manner which keeps your business competitive with the market and avoiding unexpected tax costs. Each territory will have a different approach to options and shares, with the timing of certain elections/notifications being key to the reward be valued by the employees.

6. Governance

In modern parlance... if it is not evidenced, it is not done. Improving tax controls in a manner which reduces costs and reduces and aids business.

As with most things in this fast-changing environment, successful businesses are looking at tax through a different lens, one which enables the business to be more efficient, makes you a more attractive employer, and eases your path to market.

Tech infrastructure for growth

Nicky Tozer

SVP Oracle NetSuite EMEA



66 Scaling a business internationally can be just as difficult as launching and comes down to more than just having a great idea, product, or service.

Growing a company in today's economic turmoil is no small achievement. Entrepreneurs often believe they're ready to scale internationally as soon as they've established a business model at homehowever this is often the time when operational challenges become more apparent.

Scaling a business internationally can be just as difficult as launching and comes down to more than just having a great idea, product, or service. It's essential to understand the challenges of managing a global business and the role of technology in helping to operate and scale.

Businesses with a real-time, single view of a global business can make better investments, meet compliance requirements, drive strategic decisions, spot opportunities, and act, evolve, or diversify with confidence.

Preparing for growth

To grow, companies must be able to adapt to different business rules, regulations, and cultural expectations if expanding into new markets.

The most effective way is to a) centralise, and b) automate some processes. One solution to do a lot of the heavy lifting is an enterprise resource management platform (ERP), which will enable a business to manage multinational and multi-subsidiary operations. Efficiency gains can be seen quickly through the delivery of real-time operational visibility and consolidation.

So, in which business areas can ERP technology make the most impact?

1. Complex business structures

Although more complex, the subsidiary structure has its advantages over opening a branch office, including protecting the parent company from liability. However, it also makes processes more complicated.

As a separate business, the subsidiary needs to follow local accounting rules and generate its own financial statements. Those results must then roll up to the parent company, where different accounting standards may apply.

Consolidating data from subsidiaries in different countries and following different rules increases the time and effort required to close the books and is a common source of reporting errors.

Adopting an accounting solution specifically designed for companies with multiple legal entities allows you to post every transaction to multiple accounting books at once. In doing so, it ensures the correct standards are applied at local and headquarter level, enabling you to identify and deliver information faster.

2. Exchange rate volatility

When entering a new market, companies are expected to conduct business in the national currency. This isn't just a convenience for local trading partners, but a legal requirement in most countries.

However, dealing with multiple currencies adds uncertainty, risk, and complexity to financial processes.

Converting financial data into a common currency for analysis is often a manual process. Automating conversion using the latest exchange rates produces more timely insights, leading to more accurate results.

3. Local tax policies

Companies expanding internationally will need to keep up with tax policies. Changes are likely as economic conditions continue to put pressure on countries to raise taxes, as governments look for ways to increase revenue.

Tax rules and rates vary from country to country and at a regional level too. Knowing when to collect these taxes and what rates apply can be confusing and it becomes more difficult as you sell into more markets.

Keeping up with tax policies is too often done with spreadsheets. Automating tax collection within a single, fully-integrated system is an easier and more accurate approach to managing risk and compliance.

4. Complying with local regulation

Compliance may be the biggest challenge companies face when entering a new market. It's easy to misinterpret regulations and that can lead to costly fines or other penalties. It helps to draw on local expertise to ensure rules are being followed and automate compliance by embedding those rules within the applications you use to run your business.

With a governance, risk, and compliance programme you can confidently anticipate and act on customer, third party, compliance, enterprise, and financial risk while elevating corporate governance and controls across your organisation.

Gain a competitive advantage

Modern businesses must be data-driven, innovative, and scale rapidly, so it's difficult to argue against the automation of areas that can threaten the speed and success of that expansion.

A single, fully-integrated global system brings a more consistent, holistic, real-time view of risks, geographic nuances, and regulations that impact on domestic and global expansion strategies – freeing you up to grow your business across international markets.

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