

TECH TRACK 100

BRITAIN'S FASTEST GROWING PRIVATE TECHNOLOGY COMPANIES

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Britain's brightest win global backing

Our latest research shows a record number of hyper-growth tech companies have attracted investors, writes *Chris Marshall*

Clever British tech entrepreneurs are attracting cash from all over the world in a vote of confidence for the UK's thriving digital economy in spite of fears that Brexit could stifle investment.

More than two-thirds (68) of this year's Sunday Times Hiscox Tech Track 100 have raised money from private equity houses, venture capital firms and business angels from Europe, Asia and America. This was up from 46 last year and the highest since the league table was first published in 2001. However, there are a record 40 loss-making companies, compared with 25 typically – and this comes amid growing concerns of another tech bubble, not helped by worries over the future of Uber.

They rank alongside self-funded businesses in the 17th annual ranking of Britain's fastest-growing private technology, media and telecoms firms. Combined, the 100 have achieved record average sales growth of 99% a year over their last three years, to make a total of £2.9bn. Together they employ 15,300 people and have created 11,830 jobs over the period.

The availability of growth capital is a key feature of the healthy digital economy supporting tech firms as they scale up, as Wendy Tan White of BGF Ventures explains on page 6.

One firm benefiting from new financing is cyber-security developer Darktrace (No 3), which is backed by investors including Invoke Capital, the investment

vehicle of Autonomy co-founder Mike Lynch. It has raised \$180m (£138m), including \$75m in July. Headquartered in Cambridge and San Francisco, it is among the 80 Tech Track 100 companies that have generated revenue overseas.

Another is Farfetch (No 52), an online fashion platform that has raised £500m, including \$397m (£305m) from Chinese e-commerce business JD.com in June.

Farfetch is one of three unicorns in the table – small, fast-growing tech firms with valuations of more than \$1bn. The others are currency exchange platform TransferWise (No 5) and peer-to-peer lending platform Funding Circle (No 27). Of the unicorns that appeared in the Tech Track 100 last year, travel search engine Skyscanner was bought by China's Ctrip for £1.4bn in November, while e-commerce technology developer Ve Interactive was bought out of administration in April for a reported £2m.

Our 100 companies are located all over the UK, but 57 have their headquarters in London. These include No 1 firm Wonderly, the personalised children's book publisher whose sales have shot up 294% a year. It is among the firms breathing new life into the media sector, as Sean Duffy of Barclays explores on page 2.

A new generation of "adtech" firms, driven by advances in technology, is another feature discovered by our research, as BDO's Tony Spillert explains on page 4. These include LoopMe (No 20), which uses artificial intelligence to learn what ads to show to mobile users.

Other companies, such as Smartkeys (No 2) and Katesetter (No 62), are tipped to raise more funds on the stock markets, joining Tech Track 100 alumni such as Just Eat, now valued at £4.2bn, and Sophos, valued at £2.2bn. Tim Cockroft of N+1 Singer explores the advantages of following this path on page 8.

Some firms have thrived without external investment, such as PaymentSense (No 63), whose founders George Karibian and Jan Farrarons also started Capital on Tap (No 48). Thirty-seven of the 100 were founded by people who have started at least one other venture, as Hiscox's Steve Langan explores below.

Whether they are run by seasoned executives or first-time entrepreneurs, and regardless of their ownership, this year's league table companies show that the British tech sector is thriving.



Sitting comfortably: creating unique stories for children has turned into a booming business for David Cadjí-Newby, Pedro Serapicos, Asi Sharabi and Tal Oron

1 Wonderly 294.27%
Personalised children's books
Bedtime stories in 200 countries have gone hi-tech thanks to this company's software, which generates unique books based on a child's name, birth date or location.

Asi Sharabi, 43, conceived the idea for the business one evening in 2012 while reading a tailored storybook to his daughter. "I thought it was a great concept but poorly executed," he said.

Another two fathers and an uncle – Pedro Serapicos, 42, Tal Oron, 40, and David Cadjí-Newby, 42 – joined him to

take on the personalised book business.

They worked on their first story, whose plot changes according to the letters of a child's name, in their spare time before its launch in April 2013. By November, sales had hit 50,000 copies a month – all through word of mouth, newspaper reviews and social media.

Their profile was raised further in 2014 when Sharabi and his team appeared on BBC TV's Dragons' Den and secured £100,000 from investor Piers Linney. This was followed by £16.5m in three rounds, led by investors including Google Ventures. The funding has

enabled the company to develop its publishing platform and create new personalised stories in 12 languages.

There was a publicity coup last year when its book *The Incredible Intergalactic Journey Home*, which uses NASA images and mapping technology, was read live from the International Space Station by astronaut Tim Peake.

Wonderly, formerly known as Lost My Name, was tipped as a Tech Track One to Watch last year and has leapt into the Tech Track 100 league table with 2017 sales of £25.5m as book sales climb towards £m.

It credits its growth to its business model. It creates the stories and illustrations in-house, alongside the technology to customise the books and e-commerce software to order them online. It has no inventory and prints on demand through third parties. Books are sold through its website, not in shops, giving it direct contact with customers and control over pricing.

This month it launched a personalised book featuring the Roald Dahl character Willy Wonka. Sharabi and his team may feel they have found their own golden ticket.

2 Smartkeys 280.05%
Betting exchange
This peer-to-peer betting site allows users to set their own odds on sports events, politics and current affairs. Its chief executive, Jason Trost, 36, started the company in 2008 in an attempt to undercut traditional bookmakers by applying financial trading principles to sports betting. Since then, e5bn has swapped hands on its exchange, helping sales – which represent commission – reach £25.4m in 2016. Smartkeys has raised £2.5m from investors including T-Venture – and is reportedly considering a stock market float in New York.

3 Darktrace 267.61%
Cyber-security developer
This firm's software detects and counters cyber-security threats. Founded in 2013, it has joint headquarters in Cambridge in Britain and San Francisco in America, with a further 22 offices globally.

In May, its technology protected customers, including an NHS agency, from the WannaCry ransomware attack that hit hospitals. It has raised more than \$180m, including \$75m (£58m) in July, from investors that include Invoke Capital and Insight Venture Partners. Under chief executive Nicole Eagan, 53, sales hit £31m this year.

4 Hunter Macdonald 267.06%
IT consultancy
FTSE 100 companies and government departments are among the clients of this Reading firm. It helps companies to design and operate their IT systems more efficiently, with its team of more than 100 developers creating bespoke applications. In 2015, Hunter Macdonald paid an undisclosed sum to acquire softQware, an application development firm, helping turnover this year rise to £28.1m. The company was founded by chief executive Mark Ward, 43, Scott Gourlay, 43, and Christian Brady, 44.

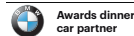
5 TransferWise 226.85%
Currency transfer provider
This London firm was founded in 2010 by Taavet Hinrikus, 36, who was Skype's first employee, and fellow Estonian Kristo Käärmann, 38, who were frustrated by the high fees charged to send money abroad. TransferWise's platform allows it to bypass the traditional international bank payments system. It says it now handles more than £1bn each month. The company has more than 1m customers, and revenue hit £67m this year. It has been valued at more than \$1bn after raising \$17m from backers, including Sir Richard Branson.

FAST TRACK

Tech Track 100 ranks Britain's private technology, media and telecoms companies with the fastest-growing sales. It is produced by Fast Track, the Oxford firm that researches Britain's top-performing private companies and organises invitation-only dinners for their owners and directors to network and meet its sponsors.

For full ranking criteria, see page 2

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For these restless innovators once is never enough

More than a third of this year's Tech Track 100 were founded by serial entrepreneurs

STEVE LANGAN
HISCOX



How many great business ideas remain stuck in people's heads, never to see the light of day? It takes courage to start your own company and conviction to keep on going in the face of adversity.

Just a few decades ago starting a business was an unusual career path. Now we have a great depth of entrepreneurial experience in the UK, much of it concentrated in the thriving tech sector. The cream of this

competitive, fast-moving part of the economy can be found in this year's Tech Track 100.

These job creators and innovators have managed the exceptional feat of at least tripling their sales over the past three years – more than 40-fold in the case of No 1 ranked business Wonderly, whose technology creates unique children's books.

One-tenth of this year's cohort were founded by women, a number we hope to see increase. Among them is Milk Visual Effects (No 73), whose co-founder Sara Bennett won an Oscar for creating visual effects for the film *Ex Machina*.

Many leaders have channelled their know-how into more than one enterprise. More than a third of the 100 were founded by people who have started at least one other venture, seven of which have seen their previous business make the Tech Track 100. Among them is Simon

Hansford, co-founder and chief executive of cloud services provider UKCloud (No 22), listed for a second year after topping the 2016 table. He previously set up IT services provider Attenda, ranked No 2 on the inaugural Tech Track 100 in 2001, which Hiscox was proud to sponsor.

Serial entrepreneurs often come in pairs, such as Dana Tobak and Boris Ivanovic, founders of Hyperoptic (No 17). The business is on a mission to provide superfast broadband to more than 2m UK homes by 2022.

"It's powerful to have two experienced co-founders working together," says chief executive Tobak. The pair's previous venture, Be Broadband, acquired by O2, for £50m in 2006, taught them the value of planning – and then relentlessly stress-testing those plans. "After we have tested our assumption, we brainstorm



Second timer: Dana Tobak, co-founder of Hyperoptic, No 17

and try to think differently. For example, should something be done in-house or be outsourced? Should we do it in the UK or abroad? We then take action and test as we go," says Tobak.

"She says they had a clearer idea of who to hire second time round. "We knew we needed a mix of big and small company experience in order to understand how big companies approach things."

Mark Richer, co-founder and chairman of video conferencing business StarLeaf (No 36), draws lessons from founding not one but three previous tech ventures. Among them is Codian, which appeared in the Tech Track 100 in 2007 before being bought by Norway's Tandberg for \$270m later that year.

"As with a lot of things in life, there is a ladder of confidence you have to climb. Each successful company increases your self-belief and

allows you to reach the next step up," Richer says.

"But beware hubris," he warns. "Having done it before is helpful. However, three previous business successes don't guarantee a fourth. You have to treat each one on its merits."

Some of Richer's colleagues have been with him since his first tech venture. Finding the right company is always a big challenge for tech companies, but a newer, more menacing problem is the rise of internet and data crime.

High-profile cyber-attacks, such as the WannaCry ransomware attack that affected many organisations including the NHS in May, have shown that even the biggest global companies and institutions are vulnerable to data and internet crime.

Technology, media and telecoms companies are most at risk. Our recent Cyber Readiness Report found

hackers are most likely to target companies in this sector, with 45% of firms reporting two or more attacks in the past year.

But they are also the best-equipped to fight back. The two cyber-crime fighters in this year's Tech Track 100 include Darktrace (No 3), which helped many organisations detect and contain the WannaCry attack.

As well as adopting such defensive technology, companies can also protect themselves against the costs such attacks incur by transferring risk to a specialist insurer, such as Hiscox. We help our clients understand and manage the challenge posed by cyber-crime, as part of our wider offering to the tech sector. After all, as the 17th annual Tech Track 100 shows, Britain's technology scene is an asset worth protecting. *Steve Langan is chief executive of Hiscox Insurance Company*

6 Festicket 224.83%
Festival booking services
 The difficulties of arranging accommodation and transfers for a trip they planned to the Coachella festival in California inspired friends Zach Sabban, 32, and Jonathan Younes, 32, to start this business in 2012. They have since secured £7.5m from investors such as Lepe Partners to develop their online platform, which sells tickets and packages to more than 1,000 festivals worldwide. Festicket also reviews festivals and produces an online magazine to create a one-stop-shop for its 2.5m members. The magazine has increased traffic to the site, helping to boost 2016 sales, which represent fees, to £16m. This year the London company opened offices in Germany and the Netherlands.

7 Oakbrook 213.84%
Consumer finance provider
 Nottingham-based Oakbrook provides consumer loans through its Likely Loans and Appro Loans websites. Led by chief executive Michael Woodburn, 46, it has developed an automated application system that enables customers to access cash within 24 hours of applying, and says it uses machine learning to help estimate borrowers' credit risk. Backed by investment firm Blenheim Chalco, the company increased its sales last year to £24.8m, a figure that represents interest payments.

8 SuperAwesome 210.71%
Children's advertising services
 As children increasingly look to digital channels for entertainment, the issue of advertising has become a sensitive one. SuperAwesome's platform was built specifically to comply with privacy laws for children, allowing brands such as Disney and Lego to run campaigns alongside games and other content. It also offers Kids Web Services, a suite of tools to produce apps and websites for kids, and PopJam, a social network for under-13s. Serial tech entrepreneur Dylan Collins, 38, founded the company in 2013 and has raised \$28m (£21.5m) from investors including Hoxton Ventures, where he is a partner. Strong growth in America, as well as three acquisitions in the past three years, helped sales hit £10.2m in 2016.

9 Ladbible Group 208.17%
Online entertainment community
 This Manchester company's flagship website, ladbible.com, is the 11th most visited site in the UK, according to Alexa traffic rankings. It was founded in 2012 by chief executive Solly Solomonou, 26, while he was a student at Leeds University. Its videos and articles range from celebrity gossip to politics, and its technology crunches the public's comments to help clients, such as Netflix and America's National Football League, target their marketing campaigns. The business has also launched other online publications, including SPORtible and Pretty 52. These helped net sales – which include revenue streams ranging from programmatic advertising to branded content – grow to £9.2m in 2016.

10 Receipt Bank 185.30%
Bookkeeping automation services
 More than 100,000 small businesses around the world use this company's software and accounting tools to save time and money on bookkeeping. Growth in its core markets of America, Europe and Australia, and the adoption of automation technologies incorporating artificial intelligence, helped Receipt Bank to more than double sales to £6.2m last year. In July this year it secured \$50m (£38.5m) from American tech investor Insight Venture Partners, bringing the total amount it has raised to \$65m. The business is led by co-founders Michael Wood, 41, and Alexis Preme, 55, and chief financial officer Alex Gayer, 42.

11 GoCardless 174.15%
Payment services provider
 Oxford graduates Hiroki Takeuchi, 31, Tom Bloomfield, 33, and Matt Robinson, 31, set up GoCardless in 2011 to make



Festicket, No 6, makes life easy for fans of music festivals – it can provide tickets, transport and accommodation in one package and produces an online magazine for its 2.5m members

direct debit payment methods accessible to more companies, and simplify the process for others. The London company now employs 120 staff and processes more than \$3bn of direct debit payments each year for more than 25,000 businesses across Europe, ranging from sole traders to large companies such as Thomas Cook and TripAdvisor. It has raised £20m in venture capital funding, with investors including Notion Capital and Accel Partners. Sales hit £6m last year after the company won new clients by word of mouth and referrals.

12 Brainlabs 172.11%
Digital marketing agency
 Chief executive Dan Gilbert, 32, left Google to start Brainlabs from his parents' attic in 2011 and has since grown the company's sales to £14.8m, a figure that includes media spending on behalf of clients. Brainlabs runs online advertising campaigns for customers including Domino's, Expedia, Which? and Deliveroo, and builds technology to help the campaigns run more efficiently. Its programmes take into account factors such as the weather, time of day, user location and user

profile to help set the right price for clients' online advertising.

13 Outplay Entertainment 171.61%
Mobile games developer
 More than 20m people have downloaded this company's Alien Creeps game, which challenges players to save the world from hordes of invading extraterrestrials. Specialising in free-to-play games for smartphones, tablets and social networks, the Dundee-based studio's other successes include Crafty Candy and Mystery Match.

Fueled by £7.8m raised from Oxford Capital Partners, Pentech Ventures and Scottish Investment Bank, last year it acquired Derby-based competitor Eight Pixels Square and generated sales of £15.6m. Brothers Richard and Douglas Hare, 47 and 49, the serial entrepreneurs behind the business, claim it is now Britain's largest independent developer of mobile games.

14 Infinox 164.26%
Currency trading platform
 Amateur traders go to this online brokerage to buy and sell foreign exchange, commodities and global shares. Based in London, it has a website that is available in six languages and has an outpost in Shanghai. Founder and chief executive Robert Berkeley, 52, raised a majority investment from an unnamed Asian investor last year, when the company changed its name from Go Markets UK to Infinox. Expansion in Asia and Europe – where it targets niche groups including expatriate Chinese investors – helped sales more than double this year to £17.5m, which represents its fees from the difference between the buying and selling price on individual trades.

15 Virtus Data Centres 163.48%
Data centre operator
 This company runs data centres on the periphery of London – in Enfield, Hayes and Slough, where it is planning to open an additional site next year. Led by chief executive Neil Cresswell, 52, it increased its market share last year, helping sales to hit £23.6m. The London-headquartered business is owned by the property investor Brockton Capital and the Singapore-based technology investor ST Telemedia. In July it received a debt

investment of an undisclosed sum from HIG Capital to fund its growth strategy. Its operating profit margin – 52% – is the highest in the league table.

16 Optal 162.84%
Payment services provider
 Optal specialises in the creation of single-use credit card numbers that are used by travel, insurance and international education companies to make faster and more secure payments to suppliers. Led by managing director Rob Bishop, 61, the firm saw its sales reach £129m in 2016, helped by the worldwide growth of the online travel market. In April it acquired business-to-business electronic payments solution provider Inpay for an undisclosed sum. Optal is now looking to expand the number of currencies in which it offers payments.

17 Hyperoptic 160.86%
Internet services provider
 Backed by billionaire hedge fund manager George Soros, this London-based company provides fibre optic broadband services that it claims are 30 times faster than the average UK connection. University friends Dana Tobak, 48, and Boris Ivanovic, 47, previously started Be Broadband, which they sold to O2 for £50m in 2006. They started Hyperoptic in 2011 and two years later raised £50m from Soros through his Quantum Strategic Partners investment vehicle. In July 2016 the company received £21m in debt financing from the European Investment Bank, followed by £100m from a consortium of banks in July this year. Expansion of its network to reach homes and businesses in 28 UK cities and towns helped sales hit £8.8m in 2016.



Outplay Entertainment, No 13, specialises in free-to-play games for smartphones, tablets and social networks

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Kano office, London.
 Alex Klein (Co-founder and CEO, Kano), Juliet Rogan (Head of High Growth & Entrepreneurs, Barclays) and Yonatan Razi-Fridman (Co-founder and Non-Executive Director, Kano).



UKCloud, No 22, has worked to improve the way government procures IT and delivers public services. It is led by co-founder and chief executive Simon Hansford

18 WDX 155.25%
Wealth management platform
Co-founders Gary Linières, 50, Brent Randall, 54, and Spencer Clark, 41, started WDX in 2012. Its niche customer relationship management platform is used by wealth managers and family offices in the UK and on the Continent. The Financial Conduct Authority's call for tighter regulation of customer records has been a boon for this London business, which saw sales climb to £6.2m last year. It launched in America in February with an office in Miami, and also has one in Vilnius, Lithuania.

19 Perkbox 146.34%
Employee engagement services
More than 25,000 businesses, ranging from small firms to the likes of Worldpay and Holland & Barrett, use Perkbox's platform to offer deals and discounts to company employees and customers. Co-founders Saurav Chopra, 39, and Chieu Cao, 40, launched the business in 2010 with the backing of angel investors including Zoopla founder Alex Chesterman and serial entrepreneur Sherry Coutu. Last year Perkbox's sales reached £14.7m, helped by £4.4m raised on equity crowdfunding platform Seed&Spark, alongside £2.5m from Draper Esprit. The venture capital firm injected another £6.6m in July this year

to finance Perkbox's expansion in Europe and America.

20 LoopMe 143.74%
Advertising technology developer
This company uses artificial intelligence to find out what ads mobile users should see on websites and apps. It claims to operate the largest mobile video platform in the world, which reaches 2bn devices and is used by the likes of Microsoft, Heineken and O. Founded in 2010 by Stephen Upstone, 46, and Marco van de Bergh, 42, the company has since opened offices on the Continent and in America, China, India, Singapore and Ukraine, helping sales hit £12.8m in 2016. In March, it announced a \$10m (£7.7m) fundraising from investors including Impulse VC and Harbert European Growth Capital.

21 iwoca 128.53%
Business finance provider
London-based iwoca says it has funded more than 10,000 small businesses across Europe since it was established in 2012. Its technology uses data, such as cashflow forecasts and sector-specific information, to assess a business's risk profile and make credit decisions quickly and accurately. In October last year it raised £21m from investors

including Prime Ventures and Acton Capital Partners. Under co-founder and chief executive Christoph Riecher, 37, sales, which are made up of interest and fee payments, grew to £13.2m last year. The company is aiming to support 1m small businesses within a decade.

22 UKCloud 127.13%
Cloud services provider
From processing online driving licence and visa applications to a DNA sequencing project that will help to fight rare diseases, UKCloud has worked to improve the way the government procures IT and delivers public services. Backed by growth-capital firm BGF, it boosted its sales to £42.9m in the year to April. It has since launched new initiatives, including a disaster recovery service to help in the event of a data centre outage or disruption, and a division that focuses on the healthcare sector. Co-founder and chief executive Simon Hansford, 52, previously set up IT services provider Attenda, which ranked No 2 in the inaugural Tech Track 100 in 2011.

23 Yieldify 124.97%
Marketing technology developer
Yieldify's software tracks mouse movements to predict when a website visitor will leave – it can then tempt him or her to stay with a promotional pop-up based on the person's viewing history. Users who abandon their purchases may also be tempted back by a series of emails. More than 1,000 websites around the world use Yieldify's technology, and its customers include Virgin Trains and Domino's. Co-founders Jay Radia, 32, and his brother Meelan, 28, have raised \$19.5m (£15m) from investors including Google Ventures, Softbank and Hoxton Ventures. They pushed annual turnover to £9.1m in April.

24 LoveCrafts 124.62%
Crafts community platform
LoveCrafts provides a meeting place for craft lovers across Europe and America through its loveknitting.com and lovecrochet.com ecommerce websites. Users swap ideas and buy products and patterns, before sharing photos of the results. It was founded in 2012 by Cherry Freeman, 41, Nigel Whiteoak, 44, and

Edward Griffith, 43, and has since raised £44m from investors including Scottish Equity Partners to help increase its share of the global crafts market, estimated to be worth \$100bn (£77bn). Sales were £18.1m this year, and LoveCrafts plans to create more online communities, encompassing sewing, quilting, papercraft, baking and cake decorating.

25 PsiOxus 120.50%
Biotechnology developer
Funding totalling £55m provided by the likes of Imperial Innovations and Mercia Technologies has helped PsiOxus develop viruses that can deliver medicines to cancer patients. It was formed in 2009 from the merger of two university spin-outs, and most of its income came from research grants. Revenue from licensing its own intellectual property hit £8.6m last year after it secured a deal with biopharma multinational Bristol-Myers Squibb. This partnership is expected to boost sales to

more than £50m this year. Led by chief executive John Beadle, 52, in June PsiOxus relocated to a new base in Abingdon, Oxfordshire, expanding its office and laboratory space seven-fold.

26 ZappiStore 116.87%
Research services provider
Founder Stephen Phillips, 48, set up this business to automate the processes behind traditional market research. The company goes into partnership with leading market research agencies by taking their proprietary research methodology and translating it into automated software, which it says is capable of generating results in hours rather than taking the usual weeks. In 2015, ZappiStore raised £12m from Dutch venture capital firm Prime Ventures to add to an undisclosed investment from advertising giant WPP the year before. The funds helped the company to expand into America, a move that boosted revenues to £11m in 2016.

27 Funding Circle 111.80%
Peer-to-peer lending platform
Funding Circle has raised £250m from venture capital firms and high-profile investors, including Betfair's co-founder Ed Wray, since it was founded in 2010 by three friends. Lenders, including 69,000 individuals and the British government, have used its website to advance more than £3bn to 33,000 businesses in Britain, America, Germany and the Netherlands. Under co-founder and chief executive Samir Desai, 34, sales hit £50.9m in 2016. In May the company received regulatory approval to launch an Innovative Finance ISA.

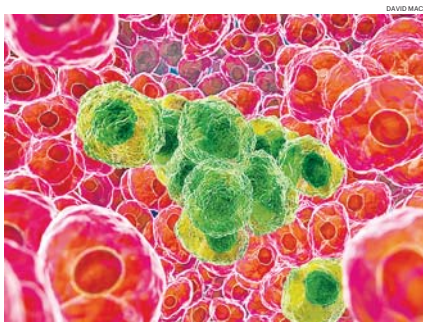
28 ImpulsePay 109.50%
Mobile payment technology
ImpulsePay's technology allows people to make purchases on their mobile phones in a few simple steps, a method of payment up to seven times quicker than using a credit card, according to the firm. Examples of partners include CrossCountry Trains, which uses its payment platform to bill passengers for access to Wi-Fi, and DonatifyToday, which uses it for charity auctions. Founder and chief executive Chris Newell, 37, set up the business in 2010 and has integrated its platform with all the leading UK mobile phone networks. This helped to boost sales in 2016 to £16.2m, a figure that includes the total value of purchases made.

29 Neuvon 107.11%
HR software developer
This Manchester outfit's software is used by large companies to cut back-office administration costs and comply with legislation on temporary agency staff and locums. It is led by chief executive John Simmonds, 50, who bought the fledgling enterprise from its seven founders in 2012. Growth has been boosted by an increase in workplace legislation and the acquisition of blue-chip clients, which helped lift 2016 turnover to £86.4m – 97% of it from sales of software and the rest from providing training and audit solutions and seminars.

30 Love Energy Savings 103.17%
Price comparison website
Love Energy Savings allows smaller companies to compare and switch energy providers. Its technology platform can compare 150 tariffs from 18 suppliers in less than 60 seconds. The Bolton business also operates a separate website that allows consumers to compare and select cheaper energy prices. It says it has helped 130,000 UK homes and businesses save on energy costs since it started in 2007. Managing director Phil Foster, 44, secured a £4.5m investment from private equity house NVM in 2015. The company nearly doubled its sales to £13.2m last year.

SECTOR BREAKDOWN OF THE TECH TRACK 100

Software	21	Online consumer services	16
Financial technology	16	Advertising technology	12
		Hi-tech manufacturing	11
		Media and entertainment	8
		Digital marketing	6
		Medical technology	3
		IT consulting and services	3
		Others	4



PsiOxus, No 25, develops viruses that can deliver medicines to cancer patients

Innovators strike advertising gold in the data mine

Over the past 17 years, Tech Track 100 has highlighted many of the most important trends in the UK tech scene, from the emergence of smartphones and cyber-security to online betting, peer-to-peer lending and cloud computing.

This year, we are seeing a new generation of advertising technology companies come of age, with 12 in the league table sharing total sales of £300m.

This is not the first time this sector has come to the fore; 2014 was also a big year for adtech, with 13 firms in the league table.

However, this current wave of ad innovators has evolved from the high volume "spray and pray" approach of many of their predecessors to a focus on

Adtech firms are using the wave of new technologies to solve the industry's age-old challenges

TONY SPILLITT
BDO



targeting, ensuring messages reach the right audience. The change has been driven by advances in technology, including real-time bidding for ads, and systems smart enough to find and analyse connections in vast amounts of data –

otherwise known as artificial intelligence.

An impressive example is Media IQ (No 44), which processes a trillion data points a day to provide campaigns for blue-chip companies such as Mastercard and Heineken. Gurman Hundal and Lee Puri founded the business in 2010 with the aim of helping clients understand their data better. Hundal says: "At our heart, we are a technology and analytics company and our investment in these areas has ultimately set us apart."

Their approach has worked well, with sales more than doubling to £91.9m in 2016. In July, the London firm raised an undisclosed sum from private equity firm ECI Partners to fund



Dan Gilbert's Brainlabs, No 12, has created ad campaigns for Deliveroo and Expedia

further growth overseas. Another, Capify (No 38), analyses more than 35bn searches a month to build campaigns for clients including Amazon and Nike. Having more than doubled sales to £25.1m this year, co-founders Dominic Joseph and Adam Ludwin understand the challenges faced by fast-growing firms in a niche industry.

"Working with the globe's biggest advertisers means that our technology must be able to power insights and campaigns all over the world," says Ludwin. "This requires high-calibre people. We are continually challenged to find those superstar individuals who not only possess highly specialist skills but also have a challenger mindset."

Dan Gilbert left Google to start Brainlabs (No 12) in 2011. Ad campaigns for the likes of Deliveroo and Expedia have helped it to raise sales to £14.8m this year.

Gilbert has also experienced the difficulty of recruiting in such a rapidly developing sector. "Our industry is changing so fast that it doesn't matter what

you know about digital because it will be outdated within a year," he says.

Ludwin and Gilbert are not alone in facing this skills gap. The tech and media businesses I speak to tell me that finding people with the right skills is their primary challenge – one that requires an early focus during Brexit negotiations.

Much has been done already to improve the training and expertise of the UK workforce, but the government could go much further to bridge the gap in tech skills.

One step in the right direction would be the reinstatement of the two-year post-study work visa for postgraduates in STEM subjects (science, technology, engineering and maths).

We do not want to lose talented people – educated in our world-leading universities – to competitor economies when we can encourage them to stay and contribute to UK businesses and growth.

As well as looking beyond the UK for talent, companies are also searching overseas for new markets, with 80% of this year's Tech Track 100

cohort generating revenue outside the UK.

A crucial factor to consider when operating globally is the complexity of regulation and taxation in different countries.

Entrepreneurs well versed in navigating domestic rules can become frustrated by the regulatory complications that arise from operating in multiple countries.

Global boundaries are shifting because of Brexit and, with potential new trade deals in the offing, it is vital to have a strong understanding of each overseas market's nuances.

As Gilbert says, the UK is the greatest market on the planet for starting a tech business. We have phenomenal talent, advisory firms and capital. However, once a tech business has traction in the UK, it is imperative to take it global to access a larger market.

As Gilbert says, the UK is the greatest market on the planet for starting a tech business. We have phenomenal talent, advisory firms and capital. However, once a tech business has traction in the UK, it is imperative to take it global to access a larger market.

Firms such as Brainlabs, Capify and Media IQ are setting the pace for our new economy and BDO is proud to be taking this international journey alongside many of this year's Tech Track 100. Tony Spillitt is UK head of technology and BDO at BDO

TECH TRACK 100



31 Red Badger 102.61%
Digital consultancy

Fortnum & Mason's online sales have exceeded those of its Piccadilly store for the first time, helped by an ecommerce site from this company. Red Badger's other recent projects include a content management system for Sky and a new online presence for London's Camden Market. The business specialises in helping companies become more interactive, often by implementing new open-source products within traditional corporate settings. Red Badger's three founders, Cain Ullah, 37, Stuart Harris, 54, and David Wynne, 37, met at IT consultancy Conchango before starting the business in 2010. They oversaw sales of £7m in 2016.

32 Threads Styling 102.30%
Online fashion services

This company uses social media to make it easier for cash-rich but time-poor fashionistas to get hold of the latest luxury clothes, footwear and accessories. Shoppers browse photos on the company's social media accounts and then use live messaging apps such as WhatsApp to place an order with Threads' personal shoppers, who might also match them with other items. Threads holds no stock – it just arranges for items to be shipped by its partner retailers. Former fashion buyer and stylist Sophie Hill, 34, started the business in 2009. Demand from customers in the Middle East helped to drive net sales to £8.3m last year.

33 Victor 101.33%
Online private jet hire

Flying the super-rich to ski resorts and chartering planes for pop stars are among the services offered by this travel management app. The company was founded by chief executive Clive Jackson, 57, who also set up Global Beach, a digital marketing firm that featured in the first Tech Track 100 in 2001. Victor has raised £15m from angel investors including Sir Elton John. In 2015 it expanded its American business with the acquisition of California charter firm Younglets. Revenue, which represents total booking value, hit £29.6m last year.

34 Immunocore 100.41%
Biotechnology developer

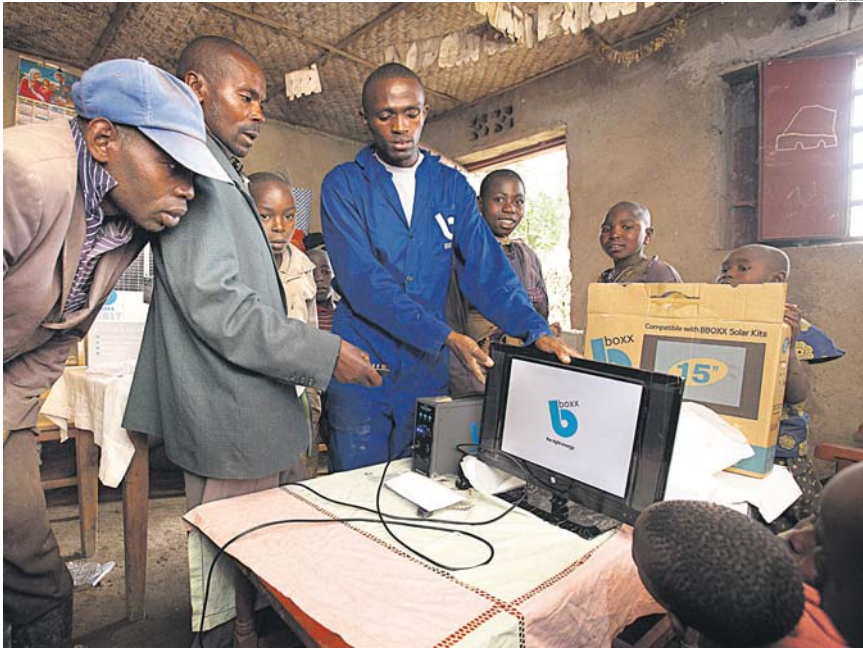
This Oxfordshire firm, led by chief executive Elliot Forster, 51, develops drugs that harness the body's immune system to fight cancer, infectious diseases and autoimmune diseases. In 2015 it raised £205m from investors including Woodford Investment Management and Mallin. It also set up a subsidiary in America. The company's partnerships with drug giants such as Glaxo Smith Kline and Astra Zeneca brought revenue of £16.5m in 2016, when it also made a large loss. It is expanding its Oxfordshire laboratory by 53,000 sq ft.

35 Blis 100.15%
Advertising technology provider

Businesses are increasingly advertising to mobile web users by exploiting the location data from their smartphones. Blis enables this targeted communication by analysing more than 550m data points each day. Its customers have included Sony, which it helped to identify and target people seen in proximity to phone shops that stocked the client's products. It also helped camera manufacturer Canon, which was able to target millennials interested in photography – but more accustomed to capturing moments on their smartphone – by looking at the locations they often visit. Led by founder and chief executive Greg Isbister, 39, the company raised funding of £19m in March last year from Beringea, Endeit Capital and Unilever Ventures. Eleven offices across four continents helped to boost sales to £28.2m in 2016.

36 StarLeaf 99.11%
Video conferencing provider

This Watford company designs and



BBOX, No 41, produces solar-powered battery packs and aims to provide reliable electricity for 20m people in the developing world by 2020

manufactures cloud-based video conferencing systems and software for company meeting rooms, desktops and mobile devices. It was started in 2008 by the management team of video conferencing business Codian, which appeared in Tech Track 100 in 2007 before being bought by Norway's Tandberg for \$270m later that year. Expansion into 50 countries helped sales at Starleaf to £6m last year, under co-founder and chief executive Mark Loney, 48. In May, the company raised \$40m (£31m) from technology investors Highland Europe and Grafton Capital. This month it is launching a messaging app that it says will provide businesses with a secure and instant way to communicate with any device.

37 Lendinvest 97.90%
Property finance provider

This company's online lending and investing platform has facilitated £1bn of property loans to help fund almost 4,000 homes since it started in 2012. It also claims to have 10% of the short-term mortgage market. Co-founders Christian Faes, 40, and Ian Thomas, 36, have raised £39m to date, including £17m last year from Atomico, the venture capital fund run by Skype co-founder Niklas Zennström. The company is now seeking to raise a further £50m with a bond offering. Lendinvest's sales – which represent loan interest, advisory fees and commission – grew to £22.1m this year.

38 Captify 96.05%
Advertising technology company

Captify's technology serves web users with targeted advertising that is based on their search behaviour. Analysing 33bn searches a month, the company uses the data to run campaigns and offer insights for the likes of Amazon, Nike, Sony and the Emirates airline. Since launching the business in London in 2011, founders Dominic Joseph, 33, and Adam Ludwin, 30, have opened further offices in New York, Paris, Hamburg and Kiev. Panoramic Growth Equity invested £1.2m in 2013 for a minority stake, and in 2015 Captify

raised a further £8m in a funding round led by Smedvig Capital. Sales more than doubled this year to £25.1m.

39 PM Connect 95.54%
Mobile content provider

Games hub Bounce Mobi, fitness tracker iFitness and recipes portal Love Food are among the lifestyle apps developed by this digital publishing and marketing business. Users in 15 countries pay for the apps through their mobile phone bills, meaning they don't have to view any ads. The Birmingham firm was started in 2010 by chief executive James Macfarlane, 29, who grew sales to an annualised £14.5m this year.

40 WorldRemit 95.07%
Currency transfer provider

After a career at the United Nations, Somali-born Ismail Ahmed, 37, started WorldRemit in 2010 as an alternative to expensive high-street money transfer services. The company has raised \$185m (£142m) from venture capital firms, including a \$100m round led by the Silicon Valley investor TCV in 2015. Every month, WorldRemit processes more than 650,000 online money transfers from 50 countries to over 140 destinations. Headquartered in London, it has opened offices in North America, Africa and Asia. Sales, which represent commission, grew to £41.1m in 2016.

41 BBOX 94.77%
Solar system manufacturer

This producer of solar-powered battery packs aims to provide reliable electricity to 20m people living off-grid in the developing world by 2020. Founders Mansoor Hamayun, 28, Laurence Van Houcke, 30, and Christopher Baker-Brian, 30, met while studying electrical engineering at Imperial College, London and set up the business in 2010. They have since sold more than 70,000 solar kits in 35 countries, lifting sales to £8.9m in 2016. The company's 450 staff work across five offices in the UK, China and East Africa. Funded by \$38m from investors including Canadian bank MKB, BBOX



Black Swan Data, No 46, founded by Steve King and Hugo Amos, helps companies to predict sales by analysing data

also provides software to monitor energy use and to manage customers.

42 Double Eleven 92.32%
Video games publisher

Led by founder and chief executive Lee Hutchinson, 36, Double Eleven is a publisher and developer of interactive games for clients such as Sony Interactive and Traveller's Tales. It primarily adapts PC games for use on consoles such as the Xbox One and PlayStation 4. Its portfolio of games includes the PixelJunk series, Goat Simulator and a recent edition of the Bafta-award winning Prison Architect, which allows players to build and control their own prison. More than 10m people have played the company's games since it started in 2009. Growth in its publishing business helped to boost sales to £6.1m in 2016.

43 Symterica 91.72%
Radiation detection equipment

This University of Southampton spin-out designs and manufactures equipment used by customs and border protection agencies to identify materials that could be used in dirty bombs. Its patented technology can be found in handheld detectors, used by the likes of the US Department of Homeland Security, and in drive-through scanners at ports in Europe, the Middle East and Latin America. It has raised £7m from investors, including innovation charity Nesta. Led by chief executive Heddywyn Davies, 65, the company grew sales to £8.2m last year.

44 Media IQ 91.20%
Digital marketing agency

Online advertising veterans Gurman Hundal, 34, and Lee Puri, 43, set up this digital marketing agency in 2010 to help clients use data more effectively. Its proprietary analytics platform, AIQ, stores and processes more than one trillion data points every day, allowing it to provide insight reports and targeted advertising campaigns to brands such as Mastercard and Sony. Overseas expansion – including the opening of offices in Germany, North America, India and Australia – helped sales, which include media buying for clients, hit £9.9m in 2016. In July Media IQ raised an undisclosed sum from private equity firm ECI Partners to help it continue to expand abroad and invest in product development.

45 Kano 87.88%
Educational computer developer

More than 29m lines of code have been written by 85,000 amateur developers using this firm's build-your-own computer kits. Primarily for children, the £140 kits come with storybooks to guide young techies on how to code games, art and music. Chief executive Alex Klein, 27, co-founded Kano in 2013 with a \$1.5m (£1.1m) Kickstarter campaign, and raised a further \$15m in 2015 from Breyer Capital. Customers in more than 86 countries – and partnerships to stock its products at Barnes & Noble and Toys R Us – boosted sales to £6.3m in 2016. Kano aims to have 100m global users by 2020.

46 Black Swan Data 87.22%
Analytical software developer

This London firm's technology helps companies to predict sales by analysing data from multiple sources, including social media and weather sites. Started by Steve King, 42, and Hugo Amos, 35, in 2011, its first customer was Disney, for which it helped to predict ticket sales for new films by using a range of metrics, including reviews and Twitter activity. Today the company provides services to many multinational clients. These include Panasonic, which uses its technology on inflight entertainment systems to analyse passenger behaviour. It raised £6.2m last year in a funding round led by Albion Ventures to further accelerate international growth and develop its product platform. With offices in Hungary, America, South Africa and the Far East, the company's sales hit £15.1m in 2017.



"Like our own business, BDO promotes creativity, keeping us one step ahead of the competition."

Exceptional Client Service

We recognise that businesses who set the pace need advisers who look ahead. When working with our clients, we take a distinctive approach to deliver solutions that will help them stay ahead of the competition. With more than 200 of our people dedicated to working with fast growing tech and media businesses, find out how we can add value to the future direction of your company.

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Fashion dynamos: Net-a-Porter founder Dame Natalie Massenet has joined the board of Farfetch, No 52, which was founded by José Neves. The company is reported to be considering a \$5bn float

47 Adaptive 86.24%
Financial software developer
Adaptive builds bespoke trading systems for financial clients ranging from investment banks to financial technology companies. Founded in 2012, it initially worked solely for one client, an investment bank, but now provides software to more than 30 customers from offices in London, Barcelona and Montreal. This helped 2017 turnover hit £15.2m. Co-founders and directors Matt Barrett, 36, Olivier Debeurles, 36, John Marks, 40, and Lolo Roze, 37, plan to launch a New York operation later this year.

Andrews, 51, and managers of the former internet bank Egg. The company generates revenue by charging a fee to facilitate loans between individuals, with £2bn having been advanced through its platform so far. Jaidev Janardana, 38, who succeeded Andrews as chief executive in 2015, oversaw sales of £3.2m in 2016. Indian finance group Wachawan Global Capital led an investment round of £32m in June, as the company prepares to launch a "next generation" bank.

50 Cloud Technology Solutions 82.62%
Cloud software developer
Software created by this Manchester firm has helped to move data on 6.2m employees at 12,000 companies and public-sector bodies onto the Google Apps range of cloud-based products. The firm has also developed a product that overlays Google Apps with features such as single sign-on, password recovery and contact sharing. Led by co-founder and chief executive James Doggart, 45, the company has customers that include the Cabinet Office, the RSPCA and Majestic Wine. Sales hit £15.2m in 2017, and it is targeting growth in America.

48 Capital on Tap 84.49%
Business finance provider
More than 25,000 small businesses have borrowed over £200m from this London-based online lender. It says it provides an all-in-one underwriting, collections and payment processing service. The business was started by serial entrepreneurs George Karibian, 52, and Jan Farrarons, 41, who also set up Paymentsense, which ranks at No 63 in this league table. Chief executive David Luck, 34, led the company to sales of £9.1m this year.

51 Ebury 82.12%
Business finance provider
Small businesses that trade internationally use this company's online platform to arrange currency hedging, payments and loans. Ebury was

49 Zopa 83.49%
Peer-to-peer lending platform
Zopa, which says it was the world's first peer-to-peer lending website, was founded in 2004 by chairman Giles

set up in 2009 by Juan Lobato, 44, and Salvador Garcia, 40, and has a list of clients ranging from online retailers to charities. The company has raised a total of £85m in funding from venture capital and private equity investors, including £50m from a consortium led by Vitruvian Partners in 2015. The money helped it to launch in 20 countries, contributing to sales of £38.1m in 2017.

52 Farfetch 81.90%
Online fashion platform
London-based Farfetch is an ecommerce platform for luxury fashion brands that are keen to reach a global audience but are reluctant to appear on Amazon or Alibaba. It was founded by Portuguese entrepreneur José Neves, 43, in 2008, and today more than 700 independent fashion boutiques and brands use it to sell their wares. It has raised more than £500m in venture capital to help fuel its expansion, including a \$379m (£305m) investment from Chinese ecommerce business JD.com in June. In the same month, Farfetch announced a content and commerce partnership with Condé Nast. Total sales – the value of goods sold through the site – almost doubled to £622m last year, when it made a large loss. In February it appointed Net-a-Porter founder Dame Natalie Massenet, 54, as non-executive co-chairman. Farfetch is reported to be considering a \$5bn stock-market float.

53 Epos Now 81.21%
Payment systems developer
When a struggling shop in the Channel 4 series Mary Portas: Secret Shopper required a more modern way of monitoring stock and sales, Epos Now provided the solution. The Norwich firm's cloud-based point-of-sale systems are used by more than 30,000 businesses ranging from shops to hotels and bars. Former bar owner Jacyn Heavens, 34, started the company in 2011 after becoming frustrated with existing technologies for monitoring stock and sales. Last year's opening of an American office in Florida helped it to boost sales to £13.9m this year. The business is investing £10.5m in an expansion plan under which it will create 150 jobs.

54 Performance Horizon 77.61%
Marketing software developer
Performance Horizon's software enables companies such as Adidas, Expedia and Sainsbury's to monitor and manage their online business partnerships. The business, which has its headquarters in Newcastle upon Tyne, also manages payments in 60 currencies to partners all over the world. Sales, which are made up of its net fees, hit £11.9m last year. The company's co-founders, Malcolm Cowley, 39, and Paul Fellows, 45, previously started the online marketing business Buyat, which featured in Tech Track 100 in 2007

before they sold it to the American internet giant AOL for \$125m the following year.

55 Qualasept Pharmaxo 76.95%
Pharmaceuticals manufacturer
This company began in 2005 as Bath ASU, a spin-out from Bath University, led by co-founders Richard Wastnage, 52, Christopher Watt, 49, and Maria Watt, 47. It prepares specialist medicines individually tailored to patients' needs, such as chemotherapy doses. In 2010 the group launched a sister business, Pharmaxo, which provides traditional

pharmacy and hi-tech homecare services. It has developed what it says is the single biggest aseptic clean room in the UK, a move that helped to boost the group's sales to £87.9m last year.

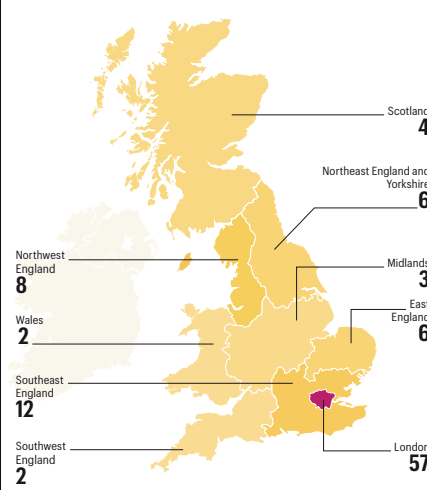
57 Clyde Space 71.95%
Satellite manufacturer
Glasgow-based Clyde Space designs and makes miniature satellites, including its CubeSat range of nanosatellites. Its customers range from Nasa and the European Space Agency to Outernet, an American broadcast data company that plans to provide free internet globally through hundreds of nanosatellites. Chief executive Craig Clark, 45, started the firm in 2005, and it is chaired by Will Whitehorn, 57, who helped to conceive Virgin Galactic. Sales grew to £5.3m last year. It completed a large order for a Mexican client in February and is planning to secure more business from Latin American customers.

58 CashFlows 71.91%
Payment services provider
This company's platform is used by more than 1,500 small businesses and large corporations in the UK and Europe to take credit and debit card payments online. It also processes withdrawals – totalling £1.7bn in 2016 – from more than 35,000 cash machines across Europe. The Cambridge business was founded in 2003 and has partnerships with both Visa and Mastercard. CashFlows received backing from majority investor Pollen Street Capital in 2011, and in 2016 acquired the online payment provider iCheque for an undisclosed sum. Sales – chiefly comprising fees for the use of its platform – hit £37.3m last year. The company is led by chief executive and chairman Martin Belsham, 57.

59 CitNow 71.89%
Video software developer
This company's technology allows a car dealer to give a tour of a vehicle without the customer setting foot in a showroom. The salesperson – perhaps an employee of Volkswagen, which has brought in CitNow across its UK dealership network – uses its app to record a personalised video about a car and send it to the customer. Mechanics use a separate app to update owners on work needed on their vehicle, and another allows owners to film their car and get a valuation. Under the Wokingham firm's founder, Andrew Howells, 56, sales hit £7m last year.

60 geo 71.76%
Smart energy monitoring
This company designs and manufactures smart devices to help people monitor and control the amount of energy they use in their homes. Its products, which can be controlled by a smartphone or PC, include smart thermostats and metering devices. Patrick Caiger-Smith, 55, and Simon Anderson, 66, started the Cambridge business in 2006 and have since sold more than 4m devices, mostly through utility companies such as British Gas and EDF, lifting sales to £22.6m in 2017. The company is backed by the Low Carbon Innovation Fund and has other investors, including former Dragon Nick Jenkins and Lord Oxburgh, a former chairman of Shell.

HEADQUARTER LOCATIONS OF THE TECH TRACK 100



Clyde Space, No 57, builds up to 12 flight-ready mini-satellites each month

Let us help: we've already been there and done it

Entrepreneurs developing the latest technology can tap into a lot of expertise and capital



WENDY TAN WHITE
BGF VENTURES

Britain's digital economy is coming of age. The entrepreneurs working on our latest ventures, from virtual reality to artificial intelligence, are able to draw on technical and commercial expertise, as well as capital, on an unprecedented scale. Many of them have been mentored or backed by an earlier generation of tech entrepreneurs who cut their teeth during the dotcom boom. Those who sold their own ventures have not

disappeared to the golf course. Instead, many share their knowledge and reinvest their wealth to fuel the next generation of innovators. The £24bn sale of Cambridge chip maker, ARM Holdings, to SoftBank of Japan last year could help to reinforce this Silicon Valley-style effect. Some of the company's senior staff will use their experience and capital to back a fresh cohort of potential world-beaters. We have already seen how Autonomy's \$11bn sale to Hewlett-Packard in 2011 resulted in the British firm's founder Mike Lynch creating a new tech fund, called Invoke Capital, which is behind cyber-security specialist Darktrace (No 3) and other ventures. My own entrepreneurial journey also illustrates the depth of our digital ecosystem. In 1999 I founded the DIY website builder, Moonfruit with my husband, Joe White, and Erik Pettersen and raised £8m to expand our venture. The dotcom

crash in 2000 hit us hard, and we cut back from 60 staff to just two as we bootstrapped the business. We turned around our fortunes, raised \$2.5m in 2010 to accelerate its growth and sold it to Hibu for \$37m in 2012. We stayed on for almost three years to scale up Moonfruit within Hibu, taking it from sales of £8m, with a 95% profit margin, to £120m by the time we left. During the bootstrapping phase, I also became part of the launch team at Zopa, working with Giles Andrews, who is now the chairman of this peer-to-peer lender, which features for the fourth time in the Tech Track 100 – this year at No 49. Its chief executive at the time, Richard Duvall, previously my boss at the former Egg internet bank, became an important angel investor for Moonfruit. Having launched, financed, scaled up and sold my own venture, for the past two years Joe and I have been working as general partners

at Entrepreneur First, a deep tech company builder. As a mentor and investor, I have helped young entrepreneurs create 21 companies. And this is where BGF comes in. The UK has done a good job of attracting venture capital – £1.6bn in 2016 – into early stage companies. But too few tech firms grow into significant enterprises. What is required is a patient source of growth capital and BGF was created to provide just that, which is why I have recently joined its venture team as a partner. It is a unique entity – a £2.5bn evergreen fund set up by the main banks – that invests its capital off its balance sheet, taking minority stakes and providing access to advisers who can help founders navigate the common pitfalls of scaling up a business. As a founder, I know the personal price entrepreneurs have to pay to get their ventures off the ground. I know deals don't always work out – the best-aid



Big hitter: Jonathan Gale of NewVoiceMedia, No 82, which is backed by BGF Ventures

plans can go awry. The key is how entrepreneurs, and their backers, respond to such setbacks. A number of Tech Track 100 alumni have already chosen to work with BGF. In this year's table they include

UKCloud (No 22), Bullitt Group (No 90), M Squared Lasers (No 79), Milk Visual Effects (No 73), as well as NewVoiceMedia (No 82). The latter sits within BGF Ventures, which focuses on younger, high-potential tech

firms. With a £200m fund, it typically invests between £1m and £6m, and has so far backed 18 companies with £50m in capital. There are challenges to Britain's status as the leading technology hub in Europe.

The sector benefited enormously from access to a single market for customers and talent across the European Union. New visas for "exceptional talent" have certainly helped to make it easier for smart, young people to come to Britain to set up ventures. But these founders also need to attract skilled people to work with them and Brexit fears do not help. We need assistance with this issue from our government and from the European Union. Fortunately, the UK's digital ecosystem is innovative and adaptable – it will find ways around such problems. And recent advances in technology, such as artificial intelligence, offer huge potential. As changes arrive for the better, Britain can be at the forefront of its development. In coming years, digital companies, backed by BGF in Tech Track 100, will be the norm rather than the exception. Wendy Tan White is a partner at BGF Ventures

TECH TRACK 100

AMERICAN BROADCASTING COMPANIES INC

BGF
Invested in Growth

61 Trak Global Group 70.60%
Vehicle tracking technology
This Crew-based company's apps and black boxes are used to monitor motorists' braking, speed and driving style. Insurers such as More Than use the data to reward safe driving with lower premiums. In addition, automotive partners offer free insurance underpinned by the group's technology, and its Appy Fleet software allows fleet partners such as Rentokil to track their vehicles via employees' smartphones. In June, Trak Global Telematics merged with sister business Carrot, a provider of insurance policies for young drivers, to create a group with combined 2017 sales of £25.3m. It is led by co-founder and chief executive Nick Corrie, 48.



Sara Bennett, co-founder of Milk Visual Effects, No 73, won an Oscar for work on the film Ex Machina

62 RateSetter 68.00%
Peer-to-peer lending platform
This firm allows 50,000 investors to lend directly to borrowers and set their own interest rates. Under co-founder and chief executive Rhidian Lewis, 40, it has raised £30m from investors including veteran fund manager Neil Woodford and sales, which are made up of fees, hit £23.7m this year. In May, it appointed City veteran Paul Manduca as chairman, as it gears up for a stock market float. In July, RateSetter revealed that it had taken over two businesses and acquired a minority stake in a third, to protect investors from losses. Then, last Monday, it was reported that the company had put investors' money into investments offered by rivals without telling its customers. RateSetter says it no longer does this.

In 2016, the company has raised £17m from investors, including IQ Capital and Draper Esprit.

63 Paymentsense 67.54%
Payment services provider
Through its proprietary technology platform, Paymentsense helps small businesses process payments online, in store, over the phone and on the move. Founded in 2009 by serial tech entrepreneurs George Karibian, 52, and Jan Farrarons, 41, it now serves more than 60,000 businesses – providing e-commerce services and chip-and-pin machines – from offices in London, Hull and Belfast. Last November, chief executive Jed Rose, 37, secured a £10m funding facility to develop additional services and target expansion into new European markets. Growth in the UK and Ireland helped to boost sales to £62.3m in 2017.

65 AnalogFolk 64.50%
Digital marketing agency
A multilingual web platform and database that helps Nike. Plus members receive personalised training and advice on sport skills is just one of the recent projects undertaken by this digital agency. Bill Brock, 42, and Matt Dyke, 41, founded AnalogFolk in 2008 and have since opened offices in Sydney, Hong Kong, New York and Portland. Demand for its services – including data analytics, social media strategy and platform development – from brands such as Dulux, Booking.com and Costa Coffee helped sales hit £27.7m in 2016.

66 Egress 62.09%
Data security provider
Egress supplies data security services designed to protect shared information. The company's Switch platform enables users to set date and time restrictions on when their emails can be accessed, and even revoke messages after they have reached the recipient's inbox. The company's software and support services are used by public sector bodies across the UK, including 35% of all local authorities, such as the London borough of Camden, as well as clients including Ladbrokes, Victim Support and the Civil Aviation Authority. Egress is backed by Albion Capital, and under chief executive Tony Pepper, 39, turnover grew to £5.4m in 2016.

64 Grapesht 65.68%
Advertising technology developer
By using Grapesht's algorithm, advertisers can search for and analyse keywords on billions of webpages in real time to reach the right audiences. Founders Martin Porter, 73, and John Snyder, 51, met at Cambridge University and created Muscat, an early search engine, which they sold in 1997. They launched Grapesht in 2002, spending four years developing the technology before starting to trade. They have since opened offices in London, New York, Chicago, Singapore and Sydney, helping to lift sales to £9m

67 TouchNote 62.07%
Personalised photo-card provider
Proud new parents and holidaymakers are among the biggest customers of this app for sending postcards and greeting cards. Users upload a photo from their smartphone or tablet and add a message; TouchNote then prints the result and posts it. So far, the company has sent more than 9m cards all over the world. It has also started sending personalised canvases and framed

68 Secret Escapes 61.31%
Online travel services
More than 35m people have signed up as members of this website, which says it aims to inspire the world to escape. They can choose from 500 deals each week for four and five-star hotels and holidays, ranging from UK country house hotel and city breaks to luxury European getaways and long-haul travel. The company has raised £5m from tech investors including Google Ventures and Index Ventures, helping it to launch websites targeting America and nearly 20 countries in Europe and Asia. Founders Alex Saint, 46, and Tom Valentine, 36, started the business in 2010 and have used television advertising to bring it to the public eye, helping to boost sales, which represent commissions, to £48.7m last year.

69 Giacomo 60.73%
Cloud services provider
More than 4,000 software resellers, consultants and IT service providers use this company's cloud-based MessageStream platform to buy products ranging from email software and document storage to encryption and anti-virus software. Founder Nick Marshall, 47, started Giacomo as an internet services provider in 1999. He led a management buyout last year, supported by an undisclosed investment from private equity firm LDC. Sales hit £6.6m in 2016. The company expects them to double this year under new managing director Mike Wardell, 36.

70 LPW Technology 60.69%
Metal powder manufacturer
LPW's metal powders are used to make everything from turbine blades and car parts to medical implants. Its PowderLife software helps individual customers comply with their industry's manufacturing quality standards. LPW has offices in America, Germany and Italy and distribution partners in

a further seven countries, including China and Japan. Under founder and chief executive, Phil Carroll, 39, sales grew to an annualised £10.4m last year. Funded in part by April's undisclosed investment from American 3D printing company Stratasys, the Cheshire firm plans to spend £20m over the next two years to develop its manufacturing facilities and product range.

71 Prepaid Financial Services 59.05%
Payment services provider
Businesses and public bodies keen to monitor and control staff spending are signing up to the services of this London firm. Founded in 2008 by chief executive Noel Moran, 47, it operates in 24 countries and processes transactions in 20 currencies. Its flagship product is a prepaid card that can be used across Europe. Other services include contactless payment systems, smartphone apps, multicurrency cards and corporate expenses products, helping the company to generate sales of £41.8m in 2016. In February, it paid an undisclosed sum to acquire Malta-based software development firm Spectre Technologies in a move designed to accelerate its product development capabilities. It is the only company in this league table to feature for a fifth consecutive year.

72 Crowd 58.75%
Digital marketing agency
This company played digital cupid on Valentine's Day, helping its client Interflora identify men who were searching for flowers on mobile devices and then sending ads to these potential customers. It lists Hiscox, Victoria's Secret and Virgin Trains among the customers of its services in search engine optimisation, content, paid search and social media. Crowd uses a network of 1,200 digital marketing

experts, so-called Croudies, to drive marketing campaigns across 107 countries and 77 languages. It is based in London but has offices in Shrewsbury, New York and Sydney. International sales made up a third of its 2017 sales of £7.7m, which represents fees. The company is led by founders Ben Knight, 37, and Luke Smith, 42.

73 Milk Visual Effects 57.94%
Visual effects developer
An Oscar for co-founder Sara Bennett, 43, for creating visual effects used in the film Ex Machina – including a brain for robot protagonist Ava, pictured left – is among the many gongs this company has collected since starting just four years ago. It also won an Emmy for sequences in a special episode of the BBC's Sherlock and three Baftas for work on television shows including Doctor Who. Led by co-founder and chief executive Will Cohen, 46, the company attracted new business after its award wins, helping sales grow to £10.3m this year. In June it raised £2m from growth-capital firm BGF, to help it expand its studios, invest in equipment and hire new staff.

74 The Media Image 56.37%
Digital marketing agency
Grant Macfarlane, 43, created this digital marketing agency in London in 2009 as a sister company to a business he had founded in his native South Africa 18 months earlier. The Media Image offers pay-per-click search engine optimisation, social media and design services for clients such as the cosmetics company Avon, bookmaker Coral and money transfer website Azimo. The business operates from offices in London, New York and South Africa. Gross sales, which include media buying for clients, reached £18.4m in 2017.

75 Ispotek 55.92%
Video analytics provider
Perimeter incursion, abandoned vehicles and loitering are among the scenarios that Ispotek's patented CCTV software can detect. It analyses video camera footage in real time to look for predetermined situations and then tracks any dangers it identifies. The software is used by Transport for London, Network Rail, nuclear power plants, government buildings and at 26 international airports. Led by chief executive Bill Flind, 58, the business saw sales reach £5.1m in 2016, 92% of them generated overseas. The Wimbledon-based company also has offices in the Middle East, Singapore and Canada.

76 Bede Gaming 54.41%
Gambling software developer
Bede's gambling platform handled £2.5bn of wagers last year, for clients across Europe and North America, including Rank, owner of the Mecca bingo chain. It offers access to more than 700 games from third party suppliers, as well as bingo, slots and table games developed by Bede staff at its offices in Newcastle upon Tyne, London and Sofia, Bulgaria. It is led by chief executive Michael Brady, 39, one of four experienced gambling industry operators who set up the business in 2012. Sales hit £8.2m last year.



Sitting pretty: Secret Escapes, No 68, has made good use of television advertising to boost its sales to £48.7m

LARGEST EMPLOYERS IN THE TECH TRACK 100

Rank	Company	Activity	Staff
52	Farfetch	Online fashion platform	1,242
27	Funding Circle	Peer-to-peer lending platform	741
5	TransferWise	Currency transfer provider	598
51	Ebury	Business finance provider	480
3	Darktrace	Cyber-security developer	475
41	BBOXX	Solar equipment maker	447
4	Hunter Macdonald	IT consultancy	437
82	NewVoiceMedia	Contact centre software developer	370
68	Secret Escapes	Online travel services	368
84	Brandwatch	Social media monitoring	354

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Adam Twidell's PrivateFly, No 87, has developed an app that lets customers book seats on 7000 privately owned jets

77 Mediatonic 53.77%
Computer games developer
 Amateur Surgeon, in which players attempt to perform surgery using household items such as a pizza cutter, is among the mobile games created by this London company. Other recent projects include a mobile game for Harry Potter prequel Fantastic Beasts and Where to Find Them, which it developed with Warner Bros. In 2012, Mediatonic raised an undisclosed sum from venture capital firm Frog Capital and angel investors, including Games Workshop co-founder Ian Livingston. It has since opened studios in Brighton and Canterbury, helping sales to hit £7.4m in 2016. The company is led by co-founders Dave Bailey, 33, and Paul Croft, 33.

78 InfoMedia 52.34%
Mobile payment provider
 Mobile-phone users increasingly charge small items such as car parking and coffees to their mobile-phone bills, or deduct them from pay-as-you-go credits. Northampton-based InfoMedia has developed a platform that links the two sides of the transaction, the mobile-phone companies, such as EE and Etsilast, and the merchants, such as EA Games and various coffee chains. Led by chief executive Michael Tomlins, 38, the company has invested to ensure its platform is scalable. The growth in app and smartphone use helped sales to reach £3.4m in 2016.

79 M Squared Lasers 52.13%
Laser designer and manufacturer
 This Glasgow company designs and manufactures lasers and photonic instruments for a range of applications in quantum technology, biophotonics and chemical sensing. Its customers include research institutes at universities such as Cambridge, MIT and Harvard. It was founded in 2006 by Graeme Malcolm, 48, and Gareth Maker, 52, serial entrepreneurs who had previously spun out the optoelectronics firm MicroLase from Strathclyde University

before selling it to Nasdaq-listed Cobherent for £2m in 1999. Since 2012, M Squared has received £6.3m from BGF, the growth-capital firm, helping sales to reach £13.9m this year.

80 Kimble Applications 50.60%
Software developer
 More than 30 angel investors back this London company, which provides professional services firms with software. Its features include budget tracking, forecasting and resource scheduling. Kimble Applications was started in 2010 by some of the team behind Edenbrook, an IT systems integrator that featured in the Tech Track 100 four times before it

was bought by Hitachi for an undisclosed sum in 2009. Chief executive Sean Hoban, 49, oversaw sales of £5.2m in 2016. In May the company launched new software that identifies patterns in data to suggest what steps are needed next in project management.

81 Infectious Media 50.53%
Advertising software developer
 By tailoring ads to individual consumers, Infectious Media helps the likes of Adidas and Expedia to convert ad views to sales. The London firm's recent projects have included working with Waitrose to improve the efficiency of its digital advertising so as to drive up the

number of purchases that consumers make on its online grocery site. Infectious Media's advertising platform, Impression Desk, collates, processes and integrates campaign data. The opening of new offices in Chicago and Singapore boosted its 2017 sales to £45.2m, which includes media buying for clients. Co-founder Martin Kelly, 41, leads the company as chief executive.

82 NewVoiceMedia 50.18%
Contact centre software developer
 NewVoiceMedia provides cloud technology that integrates telephony systems with existing company data to improve the performance of sales and

support staff. Working with clients such as Vax, Parcelforce and Berry Bros & Rudd, the Basingstoke company says it has benefited from the move toward cloud computing, especially by larger enterprises. The company has raised more than £100m in funding since 2010, from investors including BGF Ventures. In June 2016 it held its inaugural Connect conference at the AT&T park in San Francisco, home of the Giants baseball team. Chief executive Jonathan Gale, 49, led it to sales of £32.2m this year.

83 ActiveQuote 49.02%
Price comparison website
 Consumers can use this Cardiff company's website to find the deals that best suit them for health insurance, life insurance and life insurance. Its technology is also used by other comparison websites such as Confused.com, GoCompare and uSwitch. Serial entrepreneur Richard Theo, 54, made use of his PhD in computer networks to start ActiveQuote in 2009, putting in his own money before securing £1m in funding from 16 business angels in 2014. Under his leadership, the company increased sales to £7.6m in 2016.

84 Brandwatch 48.96%
Social media monitoring
 Each day this Brighton business analyses more than 200m pieces of online data to help brands such as Sony Music and L'Oréal understand their customers. Its technology tracks social media conversations to uncover trends and opinions and offer companies insights on what consumers are interested in. Founder Giles Palmer, 48, led a £23m fundraising in 2015 from investors including Partech Ventures to help expand the business in America, its biggest market by revenue. Sales grew to £29.1m in 2016. In June the firm launched an image-recognition platform, Brandwatch Image Insights, to help companies keep track of instances where their logos appear online.

85 Lyst 48.66%
Fashion search platform
 Co-founder and chief executive Chris Morton, 35, set up this global fashion search engine in 2010. Its 65m visitors are recommended a selection from the 4m items available on Lyst's platform, depending on their search history. Computer algorithms tell shoppers when a favourite brand has new items available. Making this possible is the company's 45 engineers and data scientists, who represent nearly half of its workforce. Lyst has raised £39m from investors including Accel Partners, Balderton and Groupe Arnault. Sales in 2017 totalled £10.5m, which represents commission paid to Lyst by retailers and brands such as Burberry and Valentino.

86 Godel Technologies 48.65%
Software developer
 Godel provides software development services to companies such as Virgin Holidays, Boden and Experian. Its current projects include developing e-commerce software for the White Company. Godel has its headquarters in Manchester, but most of its staff are based at its two software development centres in Belarus, where the firm was started in 2002. Under chief executive Neil Turvin, 36, sales hit £9.1m in 2016. The company is planning to double its 350-strong workforce by 2020.

87 PrivateFly 48.38%
Online private jet hire
 Former RAF pilot, Adam Twidell, 45, and his wife, Carol Cork, 44, raised £2m from 10 business angels to start this St Albans firm in 2008. Its website and app, built in-house, enable customers to search for and book flights on 7,000 privately owned jets. Last year the company opened an office in Fort Lauderdale, Florida, to serve its growing American clientele. Increased uptake by leisure and business customers, including celebrity jetsetters and high-flying executives, helped sales – the total value of bookings – reach £22.3m this year.



Lyst, No 85, is a fashion search engine that looks at the latest clothes and makes recommendations for its 65m visitors

Find the right backers and you can reach for the sky

A young business's upward trajectory is smoother and more certain with the backing of expert investors

TIM COCKROFT
 N+1 SINGER



Have you ever packed up your office, taken down the pictures and contemplated your next role?

Most entrepreneurs, like those who run this year's Tech Track 100 companies, experience at least one moment when everything is going against them. Yet instead of turning their backs on the venture, they keep at it – this is what makes them entrepreneurs.

We set up N+1 Singer in April 2006 backed by Singer & Friedlander, but at the

height of the credit crunch it went into administration and all hell broke loose.

Our clients rang up to say that, while it was not personal, they would not be doing business with us until they could see we were going to be OK.

It was time to pack my bags. But after the embarrassment of walking out with my possessions in a box, I got home and realised that we had to try to resurrect the business, so we got on with finding a solution. By May 2009 we had bought out Singer & Friedlander and brought in a team to restart the business.

We found new partners, our clients came back and we have since raised billions of pounds of growth capital for British businesses.

I have been lucky enough to be involved in two start-ups, having also been one of the founders of advisory firm Peel Hunt in 1988, where Charles Peel showed me how to build a business. We floated Peel Hunt in 2000 at

a valuation of £137m and it was later sold for £268m.

Because of my own experiences as a founder, I have seen companies in all the different stages of growth from the inside. This puts us in a great stead when talking to entrepreneurs about how to fund their businesses.

Nothing ever performs the way it does on a flip chart – it might be close but, in reality, none of us can predict the flight path of young companies. What we can do is ensure a business is properly funded during its development and as it begins its commercial journey.

Last year, we worked on the £3.4m float of online accounting software firm FreeAgent, which was a Tech Track 100 One to Watch in 2014. It had raised money from crowdfunding and wanted to step up into the markets by listing.

As co-founder and chief executive Ed Molyneux says of the listing process: "The float ticked a lot of boxes. Both in terms of capital but

also in terms of increasing validation in the company, the visibility of the company and also starting to generate liquidity for some of our early investors."

In listing FreeAgent, the executive team maintained control, had a new board and found supportive yet passive shareholders – this is the secret of equity markets. Perform well and the shareholders will remain passive; they are giving you permanent capital to build your business, with the strategy approved by the company's board.

Even for tech firms, floating in London is a viable alternative to the siren call of a Nasdaq listing in New York. We encourage companies to remain big fish in a smaller pool by listing here, rather than become small fish in a gigantic pool in America.

The British markets have raised £9.4bn so far this year. Market participants are looking for growth and will back firms with potential. There are several



Ed Molyneux floated former Tech Track 100 firm FreeAgent on the stock market in 2016

characteristics that investors look for in such businesses. These include the ability to use capital efficiently and expand effectively.

One example of a business in this year's league table that meets these criteria is

Virtus Data Centres (No 15), which is benefiting as more organisations opt for secure offsite IT networks. The firm is owned by the property investor Brockton and the Singapore-based technology investor ST Telemedia. It

plans to open a fourth data centre next year after sales reached £23.6m in 2016. Another strong performer is the peer-to-peer lending platform RateSetter (No 62), which matches borrowers with 50,000 lenders –

myself among them. It has raised £30m from investors including veteran fund manager Neil Woodford, and the company's sales hit £23.7m this year.

In May, RateSetter appointed City veteran Paul Manduca as chairman, a move that signals that its management and shareholders – which include Artemis, one of our shareholders – are exploring their options on ways to scale up the business, potentially through a float. At N+1 Singer, we look for good management teams running businesses with great growth stories to tell. We find them equity capital so that they have the time, stability and control to achieve their plans.

When ambitious and innovative businesses, such as those featured in Tech Track 100, have access to the right funding, there is no limit to what they can achieve. Tim Cockroft is founder and chief executive of N+1 Singer

88 Spektrix 48.04%
Ticketing software supplier
 Birmingham's Symphony Hall, the New York Theatre Workshop and Chichester Festival Theatre are among 300 arts and entertainment organisations in the UK, Ireland and North America to work with Spektrix. The firm delivers ticketing, marketing and fundraising software, with features such as real-time audience analytics and email marketing. Under co-founders Michael Nabarro, 36, and Matt Scarisbrick, 37, the company grew turnover to £5.2m in 2016, when it handled sales of more than 15m tickets, with a total transaction value of over £300m. In the same year, it also processed \$16,000 merchandise transactions, 74,000 memberships, and nearly 400,000 charitable donations.

89 Chameleon 47.97%
Smart energy monitoring
 Nearly 2m of this company's energy display units have been installed in homes around the UK since it was started by Gary Martin, 37, and Mike Woodhall, 50, in 2010. Its devices help customers monitor and reduce their energy consumption. The company designs and manufactures the display units, and then sells them through energy providers such as Eon, EDF, Scottish Power and Ovo, as part of the government's smart meter rollout. Sales hit £10.9m last year.

90 Bullitt Group 46.86%
Consumer electronics designer
 This Reading manufacturer designs and produces rugged mobile phones and other consumer electronics under licence from global brands such as Caterpillar and Kodak. It is also working on a bespoke range for Land Rover. The company raised £3.5m in investment from growth-capital firm BGF in 2012, and last year it released a smartphone under the Kodak brand designed to bridge the gap between high-end digital SLR models and mobile phone cameras. Bullitt is led by chief executive Peter Stephens, 50, formerly of Virgin Group, who works alongside co-founders and directors Richard Wharton, 45, Colin Barr, 59, and David Floyd, 54. Sales were £99.7m in 2016.

91 Lineup Systems 46.16%
Advertising technology developer
 Lineup Systems provides advertising platforms and services to some of the world's largest media companies across print, broadcast and digital media, such

as the Toronto Star, Time Inc and News UK, publisher of The Sunday Times. Applications include integrating the booking and invoicing process across different media. The company was formed in 2010 in a buyout from Metro International – now another of its customers – led by chief executive Michael Mendoza, 41. NVM Private Equity invested £3m in 2012 to help the company's overseas growth. Sales reached £7.3m last year.

92 Ratio 46.1%
Price comparison website
 People with a poor credit history or none at all are among the target customers of this company's Choose Wisely website, which aims to make it simple for people to pick financial products. Bournemouth-based Ratio also provides its software to power rival comparison services. Its other offerings include Briefd, a men's underwear subscription club, and Ramora, an artificial intelligence tool that helps ecommerce websites to convert visitors into customers. Founders Marc Biles, 36, and Tara Flynn, 31, spun the company out of the Richmond Group business incubator in 2013 and led it to sales of £8.8m this year.

93 SaleCycle 45.85%
Marketing technology developer
 Technology developed by this firm encourages online shoppers to complete abandoned transactions, helping more than 600 brands, such as Tommy Hilfiter, Hertz and Ikea, boost sales. Potential customers might see an onscreen prompt, for example, or be tempted back later by a text message or email. Chief executive Dominic Edmunds, 39, started the business in 2010 and led it to sales of £12m this year. Based in Tyne and Wear, it also has offices in America, France, Australia and Singapore and operates websites in Japanese, French and Chinese.

94 Feefo 45.07%
Customer review platform
 Feefo, an abbreviation of Feedback Forum, collects consumer reviews for more than 3,500 brands, including Paperchase, Expedia and Hiscox. The Hampshire company's clients use it to ensure that only genuine customers share their opinions, and a new feature means feedback requests can be personalised to enhance the client's brand. In March, the company announced a partnership with



On top: marketing agency MVF. No 96, operates in more than 120 countries. Its technology helps clients such as British Gas to acquire new customers

Autotrader to provide online car reviews for dealerships. Feefo is led by founder Andrew Mabbutt, 53. Nick Wheeler, founder of Charles Tyrwhitt shirts, is its main investor. Turnover grew to £8.1m this year.

95 Dianomi 44.24%
Content marketing services
 This London firm helps companies such as banks and wealth managers to reach 100m business news readers each

month. Its platform lets clients define their target audience using criteria such as demographics and location. It then places their ads on financial news websites, including Marketwatch, Reuters and CNN Money. Cabell de Marcellus, 48, Raphael Queisser, 43, and Rupert Hodson, 45, started the firm in 2003. Offices in Sydney and New York helped Dianomi to more than double its sales to £8.7m last year. It is planning to open an outpost in Germany.

96 MVF 44.06%
Digital marketing agency
 This marketing firm, ranked No 1 on Tech Track 100 in 2013, was founded in 2009 by five friends in a basement office in London's Borough Market. It now operates in more than 120 countries and clients such as British Gas and Salesforce use its technology to acquire new customers. In 2015 the private equity firm Bridgepoint acquired a 40% stake, providing investment capital that was used to open an office in Texas – MVF's first overseas site. Last February it acquired the London publisher Startups.co.uk for an undisclosed sum. Co-founder and president Titus Sharpe, 43, oversaw sales growth to £54.3m this year before chief financial officer Michael Teixeira, 44, was promoted to chief executive.

97 Know Your Money 43.94%
Price comparison website
 More than 6m savvy consumers use this comparison site each year to find the best deals on credit cards, current accounts, mortgages, insurance and loans. Small businesses can also search for products, including mortgages and energy deals. Based in Norwich, the company also provides written guides for consumers and businesses, on topics ranging from banking to buy-to-let mortgages. Additionally, it offers its technology platform for use by partner websites. Founders Jason Tassie, 39, Simon Ames, 42, and John Ellmore, 38, launched the site with a £5,000 credit card loan in 2004 and have expanded it to sales of £8.4m this year.

98 Edge Testing Solutions 42.46%
Software testing provider
 Founded in 2007 and based in Glasgow, Edge Testing helps companies to find defects in their software before it is released on the market. Developers of video games, mobile apps and internet-of-things products are among the company's clients, alongside organisations such as Heineken, Aberdeen Asset Management and the Student Loans Company. In April it opened a second UK digital test hub, in Birmingham, creating 60 jobs. Sales reached £10.1m in 2016, a figure that founder and chief executive Brian Ferrie, 42, is aiming to double by 2020. The firm also runs the Edge Academy to train software testers in order to offer graduates, school leavers and career changers an opportunity in IT.

99 M24Seven 42.43%
Internet services provider
 This Manchester internet service provider was founded in 2003 and supplies wireless internet and other connectivity services to customers such as Intu, AO.com and Laing O'Rourke. Backed by private equity firm Livingbridge, which invested in 2014, it acquired internet infrastructure firm M247 for £47.5m last October. This was

followed by the purchase of fibre network provider Venus Business Communications in March for an undisclosed sum to help it launch into the London market. The enlarged group operates from six sites across Europe and has almost 34,000 customers in 94 countries. Sales hit £33.6m this year under chief executive Lee Perkins, 44. In May the business changed its name from Metronet (UK) to M24Seven and hired Mike Darcey, 52, former chief executive of News UK, as chairman.

100 CV-Library Holdings 42.03%
Online job site
 Frustrated by his own time-consuming job hunt back in the days when he was a carpenter, managing director Lee Biggins, 41, started this online job site with a £9,000 loan in 2000. The company stores nearly 12m CVs that are accessed, for a fee, by recruitment agencies and companies including Sports Direct, G4S, Adecco and Signet Jewellers. It also advertises more than 160,000 vacancies to over 10,000 companies and provides careers advice. Outside the UK, it operates CV-library.ie in the Republic of Ireland as well as Resume-Library.com in America, where it opened an office in Boston in May 2016. Sales hit £25.2m last year.



Bullitt Group, No 90, makes rugged mobile phones and other consumer electronics for global brands such as Caterpillar

COMPANIES WITH THE BIGGEST SALES

Rank	Company	Activity	Financial year end	Sales £m
52	Farfetch	Online fashion platform	Dec 16	*£622
16	Optal	Payment services provider	Dec 16	*129
90	Bullitt Group	Consumer electronics designer	Dec 16	*100
44	Media IQ	Digital marketing agency	Dec 16	*92
55	Qualsept Pharmaxo	Pharmaceuticals manufacturer	Apr 16	86
29	Neuven	HR software developer	Jul 16	86
5	TransferWise	Currency transfer provider	Mar 17	*67
63	Paymentsense	Payment services provider	Mar 17	*62
96	MVF	Digital marketing agency	Mar 17	*54
27	Funding Circle	Peer-to-peer lending	Dec 16	*51

* Includes total transaction value * Supplied by company

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Trailblazers with an ace up their sleeves

Claire Wheeler looks at some companies that didn't make the Tech Track 100 but have the potential to become the giants of tomorrow

Picking future winners on past performance is notoriously difficult, but we have achieved just this through a combination of good judgment and luck, with some of our Ones to Watch companies. Last year we tipped Wonderbly and this year it has topped the Tech Track 100 table. Four other companies from last year's Ones to Watch – Darktrace, Hunter Macdonald, Kano and LADBible Group – have also moved on to the list after developing innovative technologies and boosting sales by winning blue-chip customers.

This year's 15 companies do not meet the criteria for the main table but some are well on their way. With a reported valuation of \$1.7bn, BenevolentAI's platform, which analyses data to speed up drug development, is attracting international attention. It has an £800m licensing deal with America's Johnson & Johnson to work on a treatment for Alzheimer's, and it says that sales of £2.6m last year are forecast to hit £7.5m this year. Founder Ken Mulvany, 49, sold his previous drug discovery firm Proximagen, to an American group for \$53m in 2012.

Virtual reality developer Improbable became the child prodigy of British tech in May when Japan's SoftBank led a \$502m investment that valued it at more than \$1bn and is the largest round of venture financing in British history. The company, which has not supplied sales figures, was started in 2012 by two

Cambridge University computer scientists and video game enthusiasts – Herman Narula, 29, and Rob Whitehead, 26 – and says its pioneering technologies have applications in areas ranging from building design to disease mapping. Many of this year's Ones to Watch companies have flourished thanks to insights from their founders' previous careers. Dafydd Stuttard, 44, started PortSwigger Web Security after working as a professional hacker testing IT security, and increased its sales to £5.7m last year. Tania Boler, 40, used her experiences at women's health charity Marie Stopes to develop Elvie, a pelvic floor exercise device. Her firm features in our list because of its potential, but it has also not revealed its sales.

Two decades in insurance helped Steven Mendel, 50, develop Bought By

Many, which it says turns the traditional insurance model on its head. Its technology uses social media to identify groups of people with niche insurance needs and helps to bring them together for greater buying power. Its customers include mountain bikers and owners of exotic pets. Gross premiums of £9.7m are set to jump to £20m next year.

Other Ones to Watch firms have hired experienced entrepreneurs to boost their potential. Jonas Almgren, 53, helped to lead two companies to stock-market floats in America before joining Artfinder in 2012, where he relaunched its platform and helped it raise sales to £1.2m last year. Will Franks, 52, sold the telecoms firm Ubiquisys, which he founded, to Cisco for \$30m in 2013, and last year became chief executive of smart city technology developer Telensa, which had sales of £22.8m this year.

Personal experience also counts. For Cameron Stevens, 39, the challenge of funding his MBA prompted him to start Prodigy Finance, backed by the co-founder of Betfair, Ed Wray. Its lending platform has facilitated \$325m of loans for 7,100 students from 118 countries. Revenue reached £5.5m last year, and last month Index Ventures led a \$40m funding round to drive US expansion.

Crowdfunding has helped three companies to obtain early-stage financing. Educational computer developer Pi-Top used the Indiegogo platform to raise start-up funds in 2014, and its sales grew to £2.2m last year. Season-ticket financing platform Commuter Club had sales of £638,000 in 2016 after securing £2m from crowd investors. Currency transfer firm Revolut, which had sales of £2.4m in 2016, claims that in July it raised £4m in 24 hours on the Seed&Spark platform.

Oxford graduates Eamon Jubbaw, 25, and Husayn Kassai, 27, balance the zeal of youth with the rigour of advanced maths in their firm, Onfido. It says that machine learning algorithms make its identity verification software more intelligent with every document checked. Onfido claims to have 1,500 customers and has secured \$30m from investors. Sales of £5m in 2016 are forecast to grow fourfold to £20m this year.

Finding an underserved market, and developing a technology to exploit it, has been pivotal for three companies. ClearScore says 4.9m people used its platform to check their credit score free, and revenue from commissions grew to £13.3m last year. Curve claims to have signed up 75,000 people to its spending card, boosting revenue from £600,000 this year to a forecast £4.8m next year.

MarketInvoice says its financing technology will have facilitated cash advances totalling £2bn by the end of this year, boosting sales to £6m.

All 15 of this year's companies are nurturing innovations that could put them into the Tech Track 100 next year. We shall watch them closely.



Shachar Bialick, founder of Curve, says he has signed up 75,000 people to the company's spending card and forecasts that sales will rise to £4.8m next year

ONES TO WATCH: 15 RISING TECH COMPANIES

Company	Activity	Location	Financial year end	*Latest sales, £000	*Forecast sales, £000	Staff	Founded
Artfinder	Art-buying platform	Central London	Dec 16	1,181	3,600	17	2010
Connects 10,000 artists in 108 countries with customers looking for paintings, prints and sculptures. Half of the company's sales are in America, its fastest-growing market							
BenevolentAI	Drug discovery and development	Central London	Dec 16	2,585	7,500	80	2013
Valued at \$1.7bn, it applies machine learning to identify new drugs that can be used to help fight diseases such as Alzheimer's. It has launched 24 drug candidates since starting							
Bought By Many	Specialist insurance platform	Central London	Mar 17	9,700	20,000	51	2012
Says it analysed 40,000 social media comments from cat and dog owners to develop its first insurance product. It has raised £13m and plans to raise a further £20m this year							
ClearScore	Credit-scoring technology developer	South London	Dec 16	13,300	30,000	127	2015
Over 4.9m people have checked their credit score on its platform, which it says was the first free service in Britain. It was co-founded by a former UK managing director of Google							
Commuter Club	Season-ticket financing	Central London	Dec 16	638	1,556	20	2013
More than 10,000 commuters use this firm's online platform to buy season tickets, disrupting a market that it says is worth £4bn a year. It is backed by £2m from crowd investors							
Curve	Bank card technology developer	Central London	Mar 17	600	4,800	30	2015
More than 75,000 people have applied for its spending card. The firm has raised £10m from venture-capital and angel investors as it builds more financial products into its platform							
Elvie	Female health technology developer	Central London	Dec 16	n/a	n/a	30	2013
Has raised £8.4m to develop a pelvic floor exercise device that it sells in 60 countries. Two former Dyson engineers are designing its next product, for new mothers							
Improbable	Virtual reality technology developer	Central London	May 17	n/a	n/a	200	2012
Was valued at more than \$1bn in May when it raised \$502m from Japan's SoftBank in the largest round of venture financing in British history, but it does not disclose its sales							
MarketInvoice	Invoice financing platform	East London	Dec 16	4,400	6,000	75	2011
Says its platform lends £15,000 a minute to smaller companies, which borrow against unpaid invoices. It expects to have facilitated cash advances totalling £2bn by the year's end							
Onfido	Identity verification software developer	Central London	Dec 16	5,000	20,000	150	2012
Has raised more than \$30m to develop its machine learning technology, which it says detects fake documents for more than 1,500 clients in 132 countries							
Pi-Top	Educational computer developer	East London	Dec 16	2,170	8,100	50	2014
Has sold over 75,000 devices and last year opened an office in America. Its latest computer integrates with Amazon's Alexa and had 10,000 orders before it was launched							
PortSwigger Web Security	Cyber-security developer	Cheshire	Oct 16	5,698	8,500	25	2008
Started by a former professional hacker, this firm makes software that is used by Microsoft, Google and Samsung and which it says is sold in 120 countries							
Prodigy Finance	Student finance provider	Central London	Dec 16	5,474	13,000	126	2007
Has facilitated loans totalling \$325m to help 7,100 postgraduate students pay for their studies. In August it raised \$40m from investors led by Index Ventures to expand in America							
Revolut	Currency transfer provider	East London	Dec 16	2,363	12,000	200	2015
More than 800,000 people use its app to spend, exchange and send money. It has raised \$88m and claims a crowdfunding in July raised £4m in 24 hours							
Telensa	Smart city technology developer	Cambridge	Mar 17	22,836	n/a	63	2005
Says its systems and sensors are used in 80 cities and cut streetlight energy consumption by 30%. The firm raised £13m in venture capital last year to develop new technologies							

* Sales and forecast sales have been provided by the companies

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