TECH NATION 2017

AT THE FOREFRONT OF GLOBAL DIGITAL INNOVATION

From

TECH CITY UK

TECH NATION 2017

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#TechNation
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**THE RT HON THERESA MAY, MP
THE PRIME MINISTER**

Today more than 1.5 million people are already working within the digital sector, or in digital tech roles across other sectors, while the number of digital tech jobs across the UK has grown at more than twice the rate of non-digital tech sectors. From analysts to web developers to software architects, these pioneers of our digital economy are at the forefront of a great British success story.

Britain already leads the world when it comes to new technology. We make more contactless payments than anywhere else and we help to lead the way in everything from FinTech to Artificial Intelligence. We are natural innovators, eager to incorporate the latest innovations into our lives.

As Prime Minister I am determined that we will build on this success as we seize the opportunities that arise from leaving the EU and seek to build a bold new future for our country. That is why support for the digital tech sector is an important element of the government's modern industrial strategy, helping to deliver a high-skilled, high paid Britain where opportunity is spread across every community, not just the traditional areas of London and the South East.

Through close co-operation between government and our tech industry we will help to ensure that Britain remains one of the most competitive places in the world to start and grow a tech business. We will expand the scope of our digital tech industries, funding Artificial Intelligence, robotics, 5G, smart energy and more. We will broaden their reach across the UK, create new Institutes of Technology, and reinvigorate STEM and digital education to equip young people for the workplaces of the future.

In doing so, we will also take an important step in helping to build a future in which everyone - from every background and every part of the country – has the skills and support to reach their full potential. Every entrepreneur, every innovator and every employer in the tech sector and beyond can play a huge part in this, helping to build a country that truly does work for everyone.

Foreword & Introduction

EILEEN BURBIDGE,
CHAIR, TECH CITY UK
PARTNER, PASSION CAPITAL

GERARD GRECH,
CEO, TECH CITY UK

Welcome to Tech Nation 2017, a journey across the UK's digital landscape that provides a data-rich analysis of Britain's thriving digital economy and clusters.

In this, our third annual report, we shine the spotlight on the UK's digital tech economy. We highlight innovation in every corner of the UK, from Bristol to Edinburgh, with over 60 company case studies. London continues to be an international digital powerhouse and its ripples are increasingly spreading throughout the nation.

Tech Nation 2017 gives the clearest indication yet that the UK possesses unrivalled digital tech specialisms. The digital economy is growing twice as fast as the wider economy, with an economic output of close to £100 billion per year.

Tech City UK is optimistic about the future of the UK's strong digital ecosystem. We're proud of what we've achieved together. We work with entrepreneurs, investors, universities, accelerators and government policy-makers to help build a vision for our tech nation. The UK now has a tech industry that is the envy of Europe and a FinTech hub that is the envy of the world.

That being said, it is critical that we future proof what we have achieved so far. The recently announced digital strategy from the UK government is already setting us on the right path. Tech is at a critical juncture and as we head into the future we must reassure founders, international talent, investors, and our home-grown digital work force that the UK is and will remain the best place to start and scale world-class digital businesses.

This year's Tech Nation 2017 survey received the largest response yet from the UK tech community. We received more than 2,700 submissions, roughly half of them from CEOs. They told us about the achievements they're celebrating and the challenges they face. They help us see what needs to be done to stay ahead in this global race.

Brexit will bring both challenges and opportunities; the two key drivers of growth are talent and investment. Our survey respondents were unequivocal: maintaining strong access to both is crucial as we propel ahead. We believe it can be done.

We would like to thank our Tech Nation Community Partners – over 220 of them, our board and advisory panel, the UK Government; from No 10 Downing Street to DCMS; and of course, Tech City UK – a team we are so proud to be part of.

We hope you will join in celebrating the enormous successes showcased in Tech Nation 2017.

TECH NATION 2017

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A SPECIAL THANKS TO OUR PROJECT PARTNERS

frontier economics

nesta

burningglass
CAREERS IN FOCUS

PitchBook

GitHub

Meetup

JLL

Acknowledgements

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Thanks to our data partners. Ian Hathaway and Thomas Baily at Frontier Economics, Juan Mateos-Garcia and Hasan Bakhshi at Nesta, Hal Bonella at Burning Glass and Tom Duncan at JLL. Thank you to the Tech North team. Richard Gregory, Doug Jones Jr, Vicki Shiel, Kirsty Styles, James Bedford, Laura Bennett and Kane Fulton. As well as the wider Tech City UK team, who have all worked to put the third edition of Tech Nation together.

We have also been very fortunate to have the support of the UK Government, especially DCMS, BEIS and HM Treasury. Thanks to the Rt Hon Karen Bradley MP, Secretary of State for Culture, Media and Sport; the Rt Hon Matt Hancock MP, Minister of State for Digital and Culture; Matthew Gould, Director General for Digital and Media; and Sir Jeremy Heywood, Cabinet Secretary and Head of the Civil Service. Our research was also enriched by insights from members of the digital tech community across the UK. We'd like to thank: Professor Dame Wendy Hall, Professor Mariana Mazzucato; Sherry Coutu CBE; and Wendy Tan-White MBE. Thanks to the 2,700+ business who completed our survey and the 61 businesses featured as case studies. Thanks to our 220 community partners (see page 120) who helped to promote the survey and thanks to those who provided additional support and content for the report. With special thanks to Gregg Bayes-Brown, Tom Barnett, Colin Batten, Adrian Burden, Jon Bradford, Jonathan Brech, Lyndsey Britton, Emma Cheshire, Louize Clarke, Neil Cocker, Jamie Coleman, John Connolly, Charlotte Crossley, Lyssa-Fee Crump, Matt Desmier, David Dunn, Gillian Easson, Rob Earnshaw, Steve Ewing, David Greer, Rob Glover, Jennifer Hartley, Michael Hayes, Charlie Hoult, Paul Howlett, Tatjana Humphries, Alison James, Christian Jenkins, Simon Jenner, Mel Kanarek, Catrin Kemp, Mark Lawler, Fiona Lettice, Oliver Littlejohn, Nick Milner, Gareth Quinn, Ben Ravilious, Melissa Ray, Monika Radclyffe, Huw Sawyer, Kris Sum, Cathy Skelly, Ruth Spencer, Andrew Seward, Alan Scrase, Nick Sturge, Sophie Taylor, Leah Thompson, Doug Ward, Steve Wainwright, Belinda Waldock, David Watchus.

Contents

About us

At Tech City UK we believe that great digital businesses are built from strong ecosystems. Our mission is to accelerate the growth of both by optimising the conditions in which to imagine, start and grow a digital business. We are both publicly and privately funded.

We started life in East London, known as Tech City or Silicon Roundabout. Since then, we have grown nationwide through our national programmes and strategic initiatives such as Tech North.

· We **champion** tech businesses at every stage of their business lifecycle.
· We **advocate** for the tech sector, working closely with policymakers and entrepreneurs.
· We **nurture and attract** the best and brightest talent.

We do this through:

· **Business lifecycle programmes** such as Northern Stars, Upscale, Future Fifty & Founders Network.
· **Talent and skills programmes** such as the Tech Nation Visa scheme & Digital Business Academy.
· **Insight and publications** through surveys and reports eg. Tech Nation, Digital Powerhouse & Tech Nation Best Practice.
· **Events & media engagement** by connecting and upskilling people across the UK.

Get in touch to find out more: info@techcityuk.com

Programme overview

TECH NATION 2017

What is it? The largest community-driven research project of the UK's digital tech industries.
Impact: More than 200,000 annual downloads of the report, representing voices from across the UK.

FUTURE FIFTY

What is it? A powerful network of the UK's late stage tech companies providing access to a valuable peer network; expert-led classes and workshops.
Impact: Collectively, Future Fifty companies have raised $3.9 billion, 17 M&As and 5IPOs in the past 36 months.

FOUNDERS' NETWORK

What is it? Brings tech startup founders from across the North of England together to learn from world-class educators and founders.
Impact: 18 workshops over 6 months across the North of England, plus a one-day Summit, in total reaching 500+ startup founders.

TECH IMMERSION

What is it? Deep dive workshops into the UK's digital ecosystem for corporates and institutions.
Impact: More than 170 companies have received training in the past eight months.

DIGITAL BUSINESS ACADEMY

What is it? An online academy to help aspiring entrepreneurs imagine, start, grow or join a digital business.
Impact: More than 14,000 students in training, a 45% increase in the past year.

NORTHERN STARS

What is it? A pitch competition that identifies and showcases the most promising North of England-based startups, with access to high profile media and investor opportunities.
Impact: Collectively, the companies have raised $6 million through curated networks such as Tech Crunch Disrupt, Bloomberg, SXSW and more.

TECH NATION VISA SCHEME

What is it? A dedicated Visa Scheme to attract digital expertise from around the world.
Impact: 5x more monthly applications in 2016 than in 2015.

UPSCALE

What is it? A six-month programme for fast-growth scaling companies mentored by world-class coaches.
Impact: Collectively, Upscale companies have raised $239 million in funding in the past 18 months.

TECH NATION 2017
IN NUMBERS

£170BN* **DIGITAL TECH TURNOVER**

£6.8BN in 2016 **TECH INVESTMENT IN THE UK**

X2 HIGHER THAN ANY OTHER EUROPEAN COUNTRY

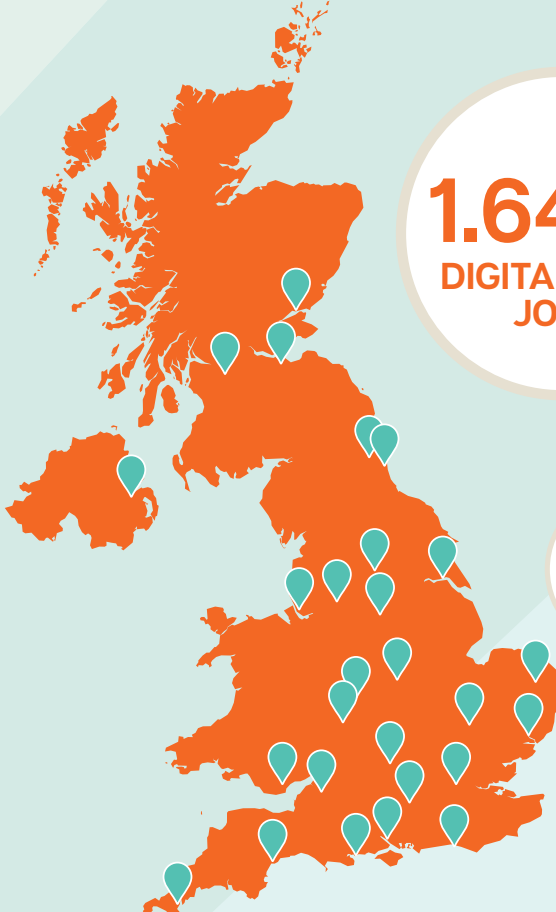**£51K** **AVERAGE ADVERTISED DIGITAL SALARY IN THE UK**

+44% HIGHER THAN THE NATIONAL AVERAGE

£97BN* **DIGITAL TECH CONTRIBUTION TO UK ECONOMY**

*Business Structure Database (2015)

DIGITAL TECH ECONOMY

1.64M*
DIGITAL TECH JOBS

+85K MORE JOBS FROM 2014–15

X2 FASTER JOB CREATION THAN WIDER ECONOMY

TOTAL DIGITAL TURNOVER (£BN)	DIGITAL TURNOVER GROWTH (2011-15)	HIGH GROWTH BUSINESSES*
LONDON £56bn	**DUNDEE** 171%	**BOURNEMOUTH & POOLE** 26%
READING £12.5bn	**LONDON** 106%	**NEWCASTLE** 22%
BRISTOL & BATH £8.1bn	**SUNDERLAND** 101%	**LONDON** 20%
MANCHESTER £2.9bn	**BRISTOL & BATH** 87%	**GLASGOW** 19%
CAMBRIDGE £2.1bn	**EDINBURGH** 85%	**BRIGHTON** 18%

*Business Structure Database (2015)

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IN NUMBERS

Digital Tech Turnover 2011–2015 (£BN)

+22% 5-YEAR INCREASE

2011	2012	2013	2014	2015
139	150	157	161	170
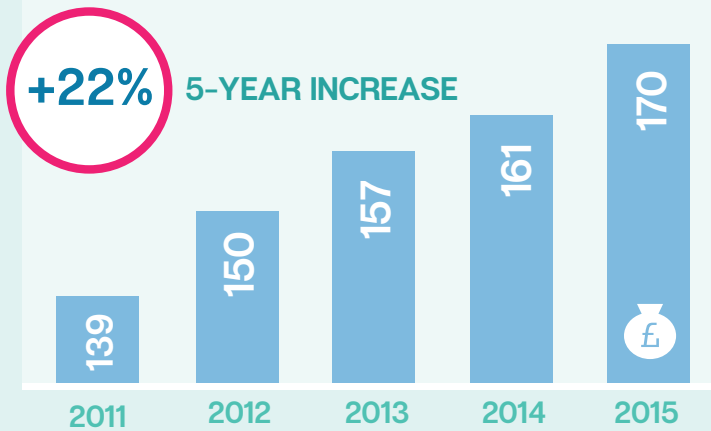
Source: BSD (2015), ONS, Tech City UK

Digital Economic Contribution 2011–15 (£BN)

+30% 5-YEAR INCREASE

2011	2012	2013	2014	2015
74	76	81	89	97
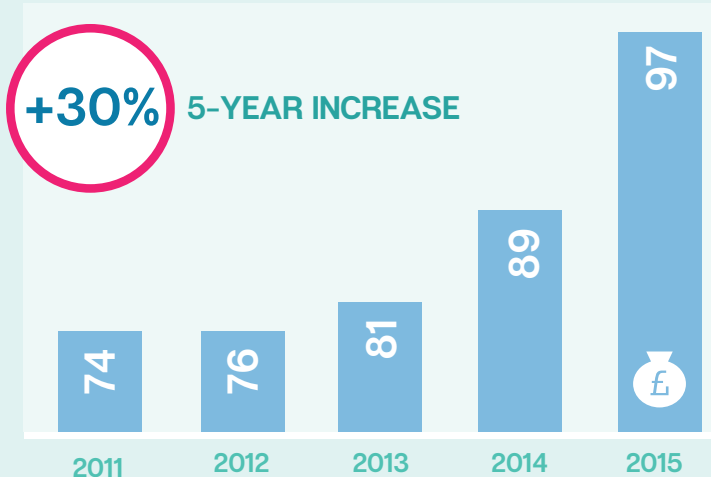
Source: BSD (2015), ONS, Tech City UK

UK Digital Tech Investment vs. Europe 2016 (£BN)

Country	£BN
UK	6.8
France	2.4
Germany	1.4
Netherlands	1.3
Denmark	1.0
Italy	0.8
Spain	0.8
Sweden	0.7
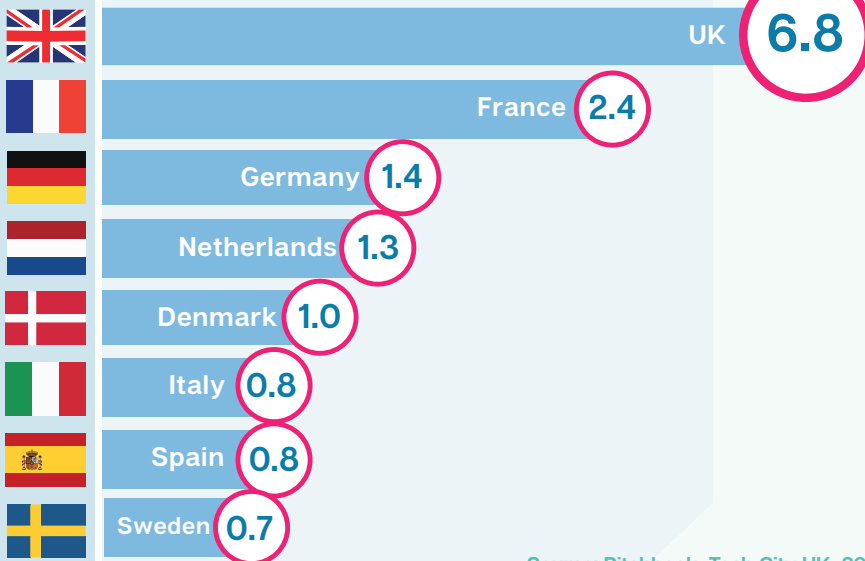
Source: Pitchbook, Tech City UK, 2016

London Digital Tech Investment vs. Europe 2012–16 (£BN)

City	£BN
London	13.8
Paris	3.6
Berlin	3.3
Amsterdam	3
Dublin	2.9
Milan	2.8
Stockholm	1.7
Copenhagen	1.5
Madrid	0.9
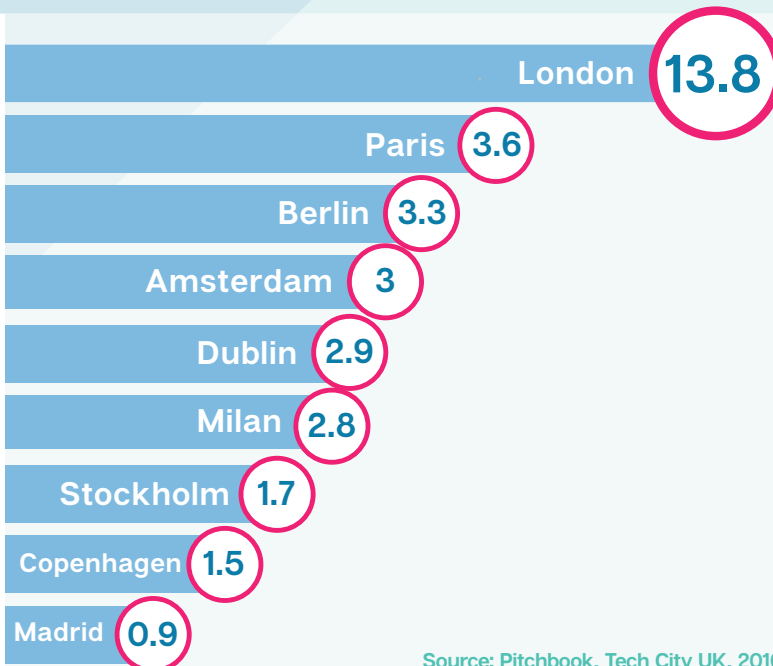
Source: Pitchbook, Tech City UK, 2016

Key Findings

1 THE UK IS THE DIGITAL CAPITAL OF EUROPE

In 2016 the UK secured £6.8 billion in venture capital and private equity digital tech investment – that's over 50% more than any other European country.

The UK is Europe's digital tech skills hub. It is home to 8 of Europe's top 20 universities. Furthermore, London has almost twice as many Github users (one of the world's leading software development platforms) as Paris or Berlin.

Interpersonal networking is critical to the UK's success - last year 22,000 Meetups (one of the world's leading meetup platforms) took place in London – nearly three times as many as any other hub.

2 THE UK'S DIGITAL TECH INDUSTRIES PUNCH ABOVE THEIR WEIGHT

The UK has 1.64 million digital tech jobs. The growth rate of digital jobs was more than double that of non-digital jobs between 2011 and 2015.

The digital economy is growing 50% faster than the wider economy.

2015 turnover of digital tech industries was £170 billion, up by 22% in five years.

The economic output (GVA) of the digital tech industries is £97 billion.

The average digital salary in the UK is £50,663 – 44% higher than the average non-digital salary.

In 2016, 68% of digital tech investment (over £4.6 billion), was recorded outside of the capital, testifying to a diversifying investment landscape.

Digital tech businesses are dynamic – 17% are high growth, compared with just under 10% in the non-digital sector.

Digital tech workers are helping to boost UK productivity. The GVA of a digital tech worker is more than twice that of a non-digital worker (£103,000 compared to £50,000).

More than 50% of digital tech businesses told us that talent supply is their number one growth challenge.

Thirteen percent of digital tech employees in the UK are from abroad, this rises to 31% in London and the South East.

1 THE UK IS THE DIGITAL CAPITAL OF EUROPE

UK Investment
London Investment
Digital Tech Talent
Collaboration

£28BN

The UK received almost 2.5X more digital tech investment than any other European country between 2012 and 2016

UK Investment

INVESTMENT / Over the past five years the UK attracted £28bn in digital tech investment

The UK is Europe's digital epicentre. With impressive access to capital and skills, some of the world's leading universities and a highly evolved digital tech ecosystem, it is a magnet for international talent and investment.

Over the past five years, the UK digital tech economy has attracted more venture capital (VC) and private equity (PE) investment than any other European country, standing at £28 billion.

UK Digital Tech Investment vs. Europe (2012 – 2016)

£Billion

Country	£Billion
UK	28
France	11.4
Germany	9.3
Netherlands	8.6
Italy	4.2
Denmark	4
Ireland	3.7
Sweden	2.8
Spain	2.2
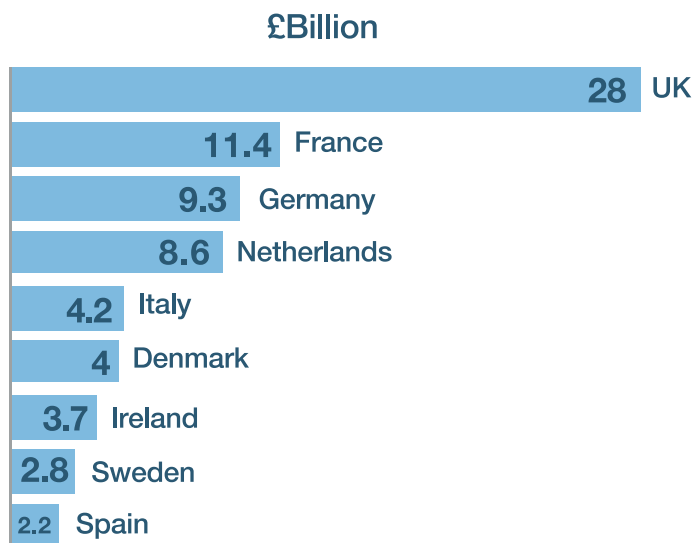
Source: Pitchbook, Tech City UK 2016

2016 UK digital tech investment

£6.8BN

Since access to funding is one of the biggest challenges faced by all startups and scaling businesses, the amount of capital invested into a nation's digital tech economy is a useful indication of its health. In 2016 the UK attracted £6.8 billion of digital tech investment. That is considerably more than its closest competitor on this measure, France, which secured £2.4 billion.

UK Digital Tech Investment vs. Europe (2016)

£Billion

Country	£Billion
UK	6.8
France	2.4
Germany	1.4
Netherlands	1.3
Denmark	0.9
Italy	0.8
Spain	0.8

Source: Pitchbook, Tech City UK, 2016

London Investment

INVESTMENT / London leads the way as Europe's Tech City
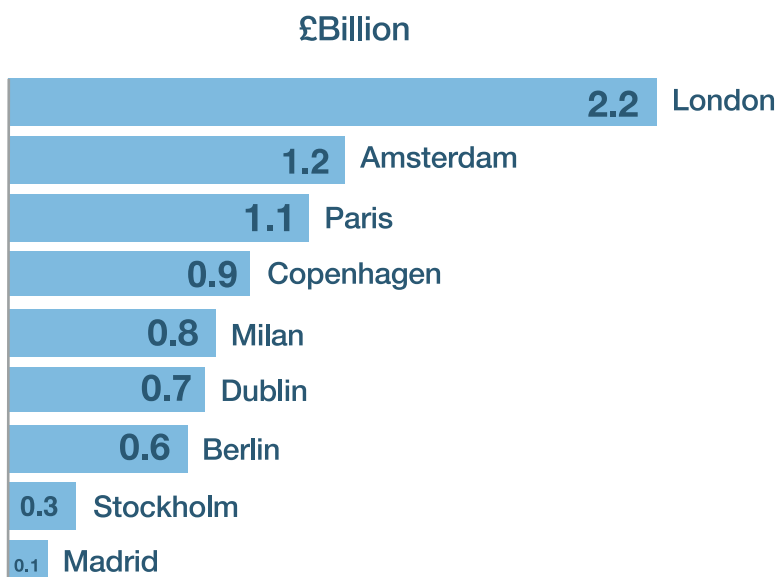
In 2016, the overall number of VC and PE backed startup deals fell across the ten largest European digital tech hubs[1], and digital tech investment was 34% lower than in 2015.

This is part of a broader global correction, following record inflows during 2015. It might also reflect a mood of increased caution among investors, in the face of heightened economic and political uncertainty across Europe and the US.

Nevertheless, London remains a major centre for investment, attracting £2.2 billion in 2016, around £1 billion more than its two closest competitors, Amsterdam and Paris.

In fact, over the past five years London has more investment than Paris, Berlin and Amsterdam combined.

London Digital Tech Investment vs Other European Cities (2016)

£Billion

City	£Billion
London	2.2
Amsterdam	1.2
Paris	1.1
Copenhagen	0.9
Milan	0.8
Dublin	0.7
Berlin	0.6
Stockholm	0.3
Madrid	0.1

Source: Pitchbook, 2016
Source: Pitchbook, Tech City UK, 2016
[1] Based on analysis of Pitchbook data for Denmark, Sweden, Italy, Spain, Belgium, France, Germany, Ireland, Netherlands, United Kingdom. Total capital invested fell from £24.5bn to £16.2bn.

Over the past five years London has attracted more investment than Paris, Berlin and Amsterdam combined

£13.8BN

London Digital Tech Investment vs. Europe (2012–2016)

£Billion

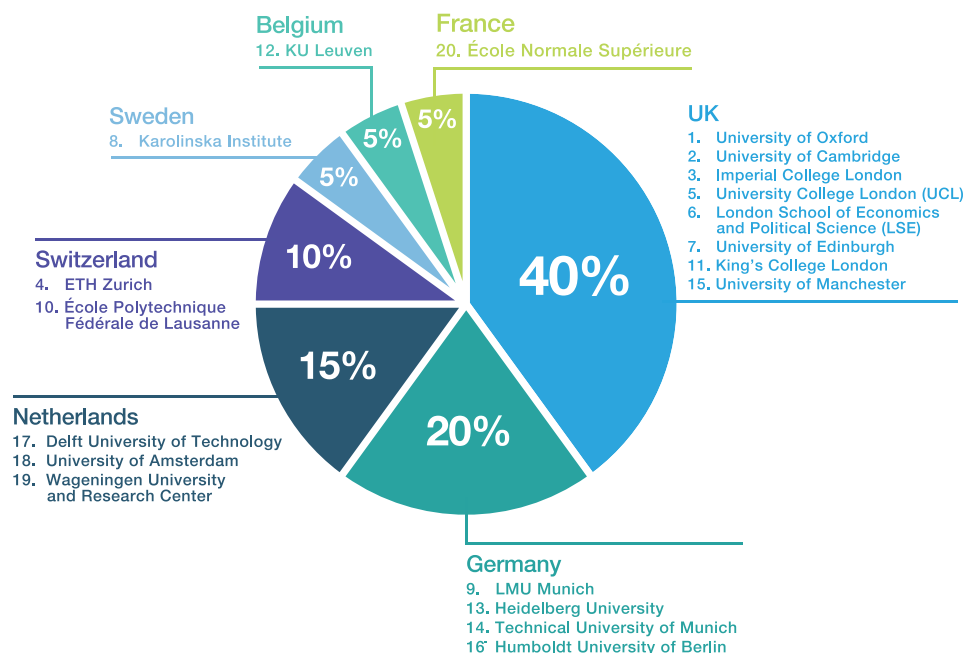| City	£Billion
London	13.8
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Amsterdam	3
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Milan	2.8
Stockholm	1.7
Copenhagen	1.5
Madrid	0.9

Digital Tech Talent

GRADUATES AND INNOVATION / The UK is home to 8 of Europe's top 20 universities

Universities are essential to all digital economies. They generate skills and innovation while attracting investment and talent.

Eight of Europe's top 20 universities are located in the UK. London alone is home to four of them – Imperial College London, University College London, London School of Economics and Political Science and King's College London – more than any other European country, let alone city.

To ensure the UK's academic pre-eminence is maintained, potential challenges associated with Brexit must be addressed. This includes ensuring that the UK continues to be seen as a welcoming place to study[1], and addressing possible pressures on funding[2].

Europe's Top 20 Universities (2016–2017)

Belgium
12. KU Leuven

France
20. École Normale Supérieure

Sweden
8.   Karolinska Institute

UK
1.   University of Oxford
2.   University of Cambridge
3.   Imperial College London
5.   University College London (UCL)
6.   London School of Economics
     and Political Science (LSE)
7.   University of Edinburgh
11. King's College London
15. University of Manchester

Switzerland
4.   ETH Zurich
10. École Polytechnique
     Fédérale de Lausanne

Netherlands
17. Delft University of Technology
18. University of Amsterdam
19. Wageningen University
     and Research Center

Germany
9.   LMU Munich
13. Heidelberg University
14. Technical University of Munich
16. Humboldt University of Berlin

Pie chart percentages: 40%, 20%, 15%, 10%, 5%, 5%, 5%

Source: Times Higher Education World Varsity Rankings, 2016-17

[1]*Source: YouGov January 2017. Their survey of 1,000 academics found that over two fifths (44%) say they know colleagues who have already lost access to research funding as a direct result of last summer's EU referendum vote - https://yougov.co.uk*
[2]*Source: UCAS. On 1st February 2017, UCAS reported a 7% decline in applications from the EU for UK undergraduate courses - https://www.ucas.com/corporate/news-and-key-documents/news/applicants-uk-higher-education-down-5-uk-students-and-7-eu-students.*

It is, of course, vital that these universities turn out 'work ready' graduates with the skills that employers across the digital tech sector urgently need. Foremost amongst these are Science, Technology, Engineering or Maths skills (STEM).

The UK and France have Europe's greatest proportion of millennials with STEM degrees[4]. Even here, however, the numbers studying STEM subjects are too few. Indeed, this shortfall of STEM graduates is a challenge across the continent, where STEM entry requirements and drop-out rates tend to be high, and participation by women in particular is low[5].
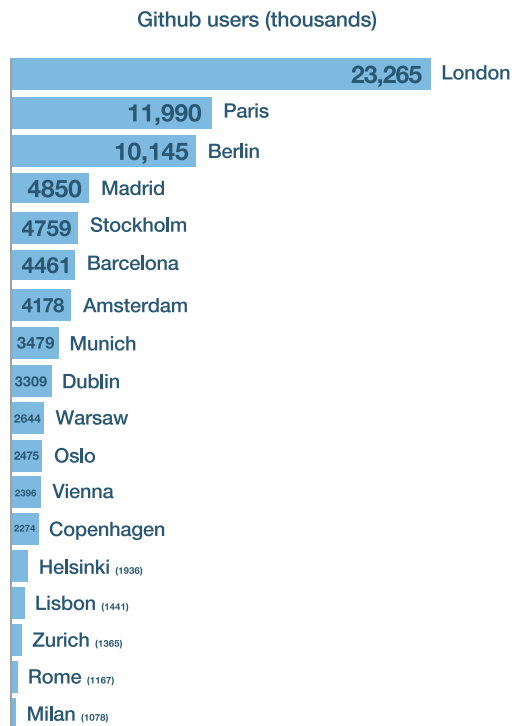
Digital Tech Talent

DIGITAL SKILLS / London has nearly twice as many Github users as Paris or Berlin

Data from Github allows us to map the exact location and density of digital tech skills across the continent. It is Europe's leading open-source platform for developers, with nearly 90,000 active users across 18 digital tech hubs last year. Its sheer size means that analysis of its users, and the programming languages in which they specialise, can give us a snapshot of the different digital tech skills harboured in each hub.

Over a quarter of Github users are located in London – almost twice as many as are found in either Paris or Berlin.

Narrow that down to users with the key digital skills and languages of Ruby, CSS, HTML and Scala, and around a third are based in the UK capital. In fact, there is high user activity across all of the top 20 programming language specialisations in London, indicating a significant breadth of skills.

Number of Github users: London vs Other EU Cities (2016)

Github users (thousands)

City	Github users
London	23,265
Paris	11,990
Berlin	10,145
Madrid	4850
Stockholm	4759
Barcelona	4461
Amsterdam	4178
Munich	3479
Dublin	3309
Warsaw	2644
Oslo	2475
Vienna	2396
Copenhagen	2274
Helsinki	1936
Lisbon	1441
Zurich	1365
Rome	1167
Milan	1078

Source: Github, Tech City UK, 2016

[4]Source: Eurostat, 2014. 0.579% of UK residents aged 20 to 29 years hold a STEM (Science, Technology or Math) degree, out of all individuals aged 20 to 29 years old in the UK.
[5]Source: Cedefop November 2016, Skill shortage and surplus occupations in Europe.

Collaboration

CONNECTING IN THE CAPITAL / London hosts three times more Meetups than any other European city at 22,000

What makes a digital tech economy successful? Capital and talent, yes, but also accelerators, affordable co-working spaces and experienced mentors. The face-to-face networking that these enable is hugely important to the growth and success of digital businesses.

Meetup, an online portal that facilitates networking, also generates data which can be used to indicate the strength of networks within Europe's digital tech hubs. In 2016 nearly 22,000 tech Meetups took place in London. That is nearly three times as many as in Berlin, Amsterdam or Paris.

Meetups in London vs. Other EU Cities (2016)

Number of Meetups (thousands)

City	Number of Meetups
London	21,866
Berlin	7963
Amsterdam	7915
Paris	7581
Oslo	3490
Zurich	3373
Barcelona	3286
Madrid	3225
Munich	3012
Stockholm	2897
Dublin	2349

Source: Meetup API, 2016. Tech City UK, 2016

2 THE UK'S DIGITAL TECH INDUSTRIES PUNCH ABOVE THEIR WEIGHT

Tech Businesses
Tech Jobs
Tech Skills
**Tech Ecosystems**
Regional Investment

VITAL STATISTICS / The UK's digital tech sector grew 50% faster than the wider economy in 2015

The UK's digital tech sector grew 50% faster than the economy as a whole in 2015 (4.8% versus 3.2%). In this section of the report, we demonstrate how this sector is helping to strengthen local economies and make the UK's business environment ever more dynamic and productive.

Tech Nation 2017 profiles 30 key digital tech clusters across the UK. Our 30 clusters are the building blocks from which the UK's digital tech economy is formed.

Economic performance of Tech Nation clusters (% growth 2011 – 2015)

Digital tech GVA **93%**

Digital tech jobs **93%**

Turnover **89%**

Productivity[6] **60%**
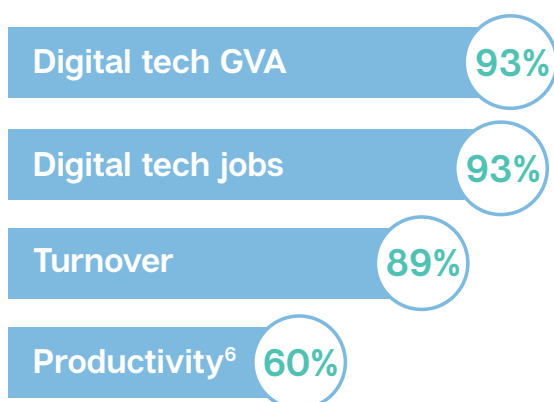
Source: ABS / BSD, Tech City UK, 2015

[6] *Based on turnover per worker (ABS / BSD, 2015).*

Digital Tech Businesses

Leading Indicators of Cluster Performance

DIGITAL BUSINESS CONCENTRATION	TOTAL DIGITAL TURNOVER	DIGITAL TURNOVER GROWTH (2011 – 15)	HIGH GROWTH DIGITAL BUSINESSES
Reading 7.26	London £56bn	Dundee 171%	Bournemouth & Poole 26%
Bristol & Bath 4.35	Reading £12.5bn	London 106%	Newcastle 22%
Cambridge 1.79	Bristol & Bath £8.1bn	Sunderland 101%	London 20%
Southampton 1.57	Manchester £2.9bn	Bristol & Bath 87%	Glasgow 19%
Oxford 1.53	Cambridge £2.1bn	Edinburgh 85%	Brighton 18%

Source: ONS Business Structure Database, Tech City UK, 2015
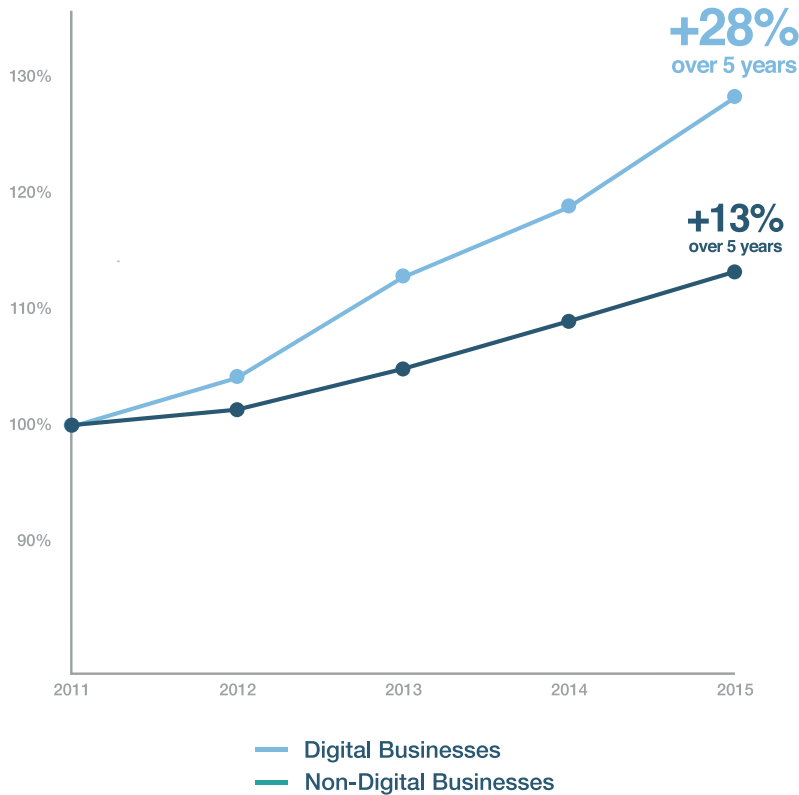
OPENING FOR BUSINESS / Digital tech businesses are forming twice as fast as non-digital

In 2015, the turnover of the UK digital tech industries was estimated at £170 billion. It grew by 22% (or £30 billion) in five years.

Over the same five-year period, the total number of UK digital tech businesses grew by 28%. That is more than twice as fast as the growth in non-digital businesses (up 13%). In 2015 alone, the number of UK digital tech businesses grew by 7%, compared with just 4% in the non-digital sector.

These new businesses are creating jobs, generating wealth and supporting the wider economy. Moreover, by stimulating new technologies, innovations and efficiencies in other sectors, they boost productivity across the board too.

Growth in Number of Digital Tech Businesses vs. Non-Digital Businesses (2011-2015)

+28%
over 5 years

+13%
over 5 years

130%

120%

110%

100%

90%

2011   2012   2013   2014   2015

— Digital Businesses
— Non-Digital Businesses

Source: BSD, Tech City UK, 2015

London has seen the greatest number of new digital tech businesses emerge, up by 42% in five years. Newcastle and Belfast have seen almost as impressive growth figures over this period, at 39% and 37% respectively. What is more, in 13 of our 30 clusters the quantity of digital tech businesses has increased by more than a quarter.

Digital Tech Businesses

BUSINESS BIRTH RATES / Rising faster in the digital tech sector at 15.2%

Business birth rates – a measure of new companies as a proportion of all businesses in an area – can tell us a lot about the vitality of an economy.

Business formation, of course, is influenced by the economic climate. Business birth rates, however, are also likely to be higher in places where the potential for profit is high and the right resources - not least talent and infrastructure - are in place.

In 2015, the birth rate of digital tech businesses across the UK was 15.2%. By comparison, the business birth rate across the wider economy was 11.6%.

So the outlook is strong at the national level, but how does it break down regionally? In the same year, all but four of our 30 clusters had a digital tech birth rate that exceeded the average in non-digital sectors. An impressive one in three had digital tech birth rates of over 15%: Sunderland 19.3%, London 18.7%, Glasgow 18.3%, Newcastle 17.5%, Edinburgh 17.2%, Liverpool 16.8%, Leeds 15.9%, Manchester 15.6%, Birmingham 15.3%, and Middlesbrough 15.1%.

Digital Tech Businesses

HIGH GROWTH BUSINESSES / Nearly twice as prevalent in the digital tech sector
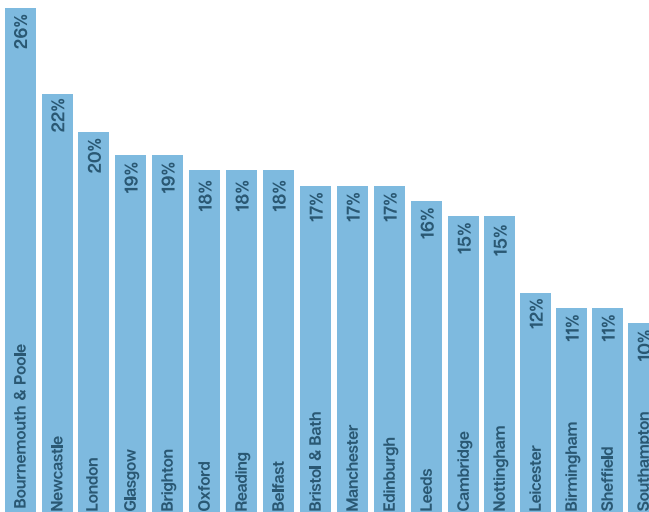
High-growth businesses are defined as businesses whose growth in annual turnover places them in the top 10% nationally. They span all sectors of the economy.

Seventeen percent of all digital tech businesses with ten or more employees are high growth. In the non-digital sector, just 9.8% of businesses of the same size can claim the same status.

So, more high-growth firms are to be found in the digital tech sector. This matters, because businesses like these play a major role in the UK's economic growth. Not least, (as we describe on pages 29 and 30), because they are more productive than average and tend to create high quality, well-paying jobs.

Our analysis revealed Bournemouth & Poole, Newcastle and London to be home to the highest concentrations of high-growth digital tech businesses.

High Growth Firms (by percentage, 2014)

Cluster	Percentage
Bournemouth & Poole	26%
Newcastle	22%
London	20%
Glasgow	19%
Brighton	19%
Oxford	18%
Reading	18%
Belfast	18%
Bristol & Bath	17%
Manchester	17%
Edinburgh	17%
Leeds	16%
Cambridge	15%
Nottingham	15%
Leicester	12%
Birmingham	11%
Sheffield	11%
Southampton	10%

Source: BSD, Tech City UK, 2015

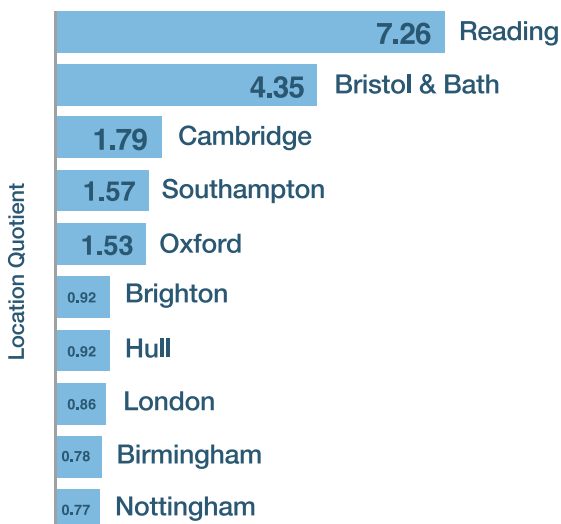## Digital Tech Businesses

DIGITAL BUSINESS CONCENTRATION /
Reading has the highest density of digital tech businesses

The geographic concentration of digital tech businesses is telling. Similar businesses tend to group together, pooling resources and requirements. But why does this matter? Broadly speaking, a concentration of digital tech businesses is good for a local economy, since it is associated with highly skilled and higher paid employment and higher levels of GVA.

This concentration is called Location Quotient (LQ) and is a measure of digital density, relative to the UK overall. The higher a cluster's LQ, the greater the concentration of digital tech businesses. In the chart, a value of one equals average digital concentration, while a value of greater than one implies a higher concentration.

Two clusters, therefore, emerge with exceptional digital tech concentrations – Reading and Bristol & Bath. Interestingly, London's LQ is below one. Despite being the largest digital tech hub in Europe by some margin, the sheer size and diversity of its economy dilutes its digital tech concentration.

Digital Tech Business concentration by Top 10 clusters (LQ – 2015)

Cluster	Location Quotient
Reading	7.26
Bristol & Bath	4.35
Cambridge	1.79
Southampton	1.57
Oxford	1.53
Brighton	0.92
Hull	0.92
London	0.86
Birmingham	0.78
Nottingham	0.77

Source: BSD, Tech City UK, 2015

Digital Tech Jobs

EMPLOYMENT / 1.64 million UK Digital Tech jobs – being created twice as fast as non-digital jobs
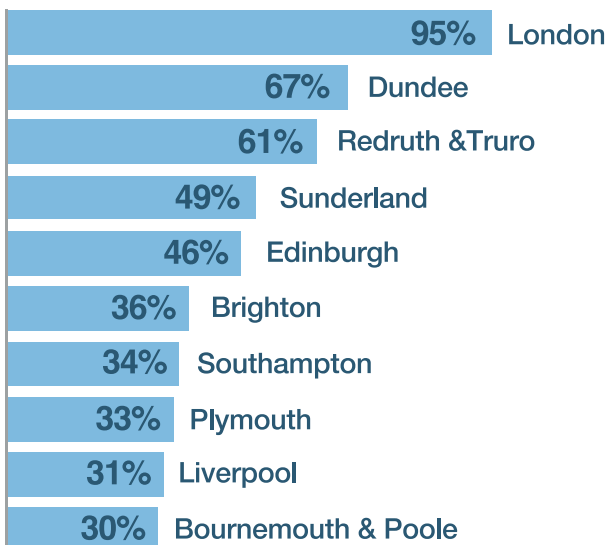
Between 2011 and 2015, the number of digital tech jobs across the UK grew by 17%. That is more than twice the 8% growth seen in non-digital sectors.

On the surface, it appears that 3% of all UK employees are in the digital tech sector. However, when we consider those who work in digital tech roles within other sectors, the figure rises to 6% (a total of 1.64 million jobs.) This represents an overall increase of 85,000 digital tech jobs during 2015 alone.

Where are these new jobs springing up? Employment in London-based digital tech businesses nearly doubled between 2011 and 2015. Particularly impressive increases in percentage terms were also seen in Dundee, Redruth & Truro and Sunderland.

Top 10 Clusters - Digital Tech Jobs Growth (2011 - 2015)

% Change in Number of Digital Jobs

| Cluster	% Change
London	95%
Dundee	67%
Redruth &Truro	61%
Sunderland	49%
Edinburgh	46%
Brighton	36%
Southampton	34%
Plymouth	33%
Liverpool	31%
Bournemouth & Poole	30%

Source: BSD, Tech City UK, 2015

Digital Tech Jobs

MAKING THE DIFFERENCE / Digital Tech workers are twice as productive as their non–digital counterparts

Gross Value Added (GVA) calculates the value of goods and services produced, subtracting the costs involved in their production. This measure, therefore, gauges the real contribution of individual sectors to the broader economy.

Today, the GVA of a digital tech worker in the UK is more than twice that of a non–digital tech worker, (£103,000 compared to £50,000). The productivity gap is growing too, rising from £48,000 to £53,000 over the last five years – further evidence that the digital tech sector is adding significant value to the UK economy.

Economic Contribution per worker in Digital Tech vs Non Digital Tech - GVA (2011-2015)

GVA (thousands)

103K

50K

Digital GVA per Worker
Non-Digital GVA per Worker
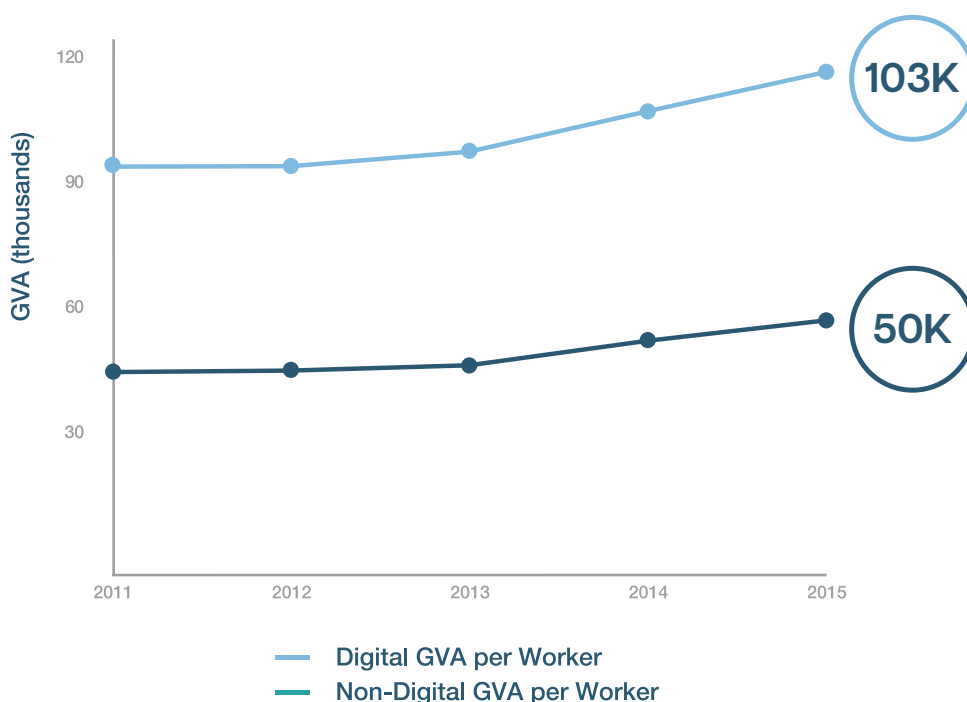
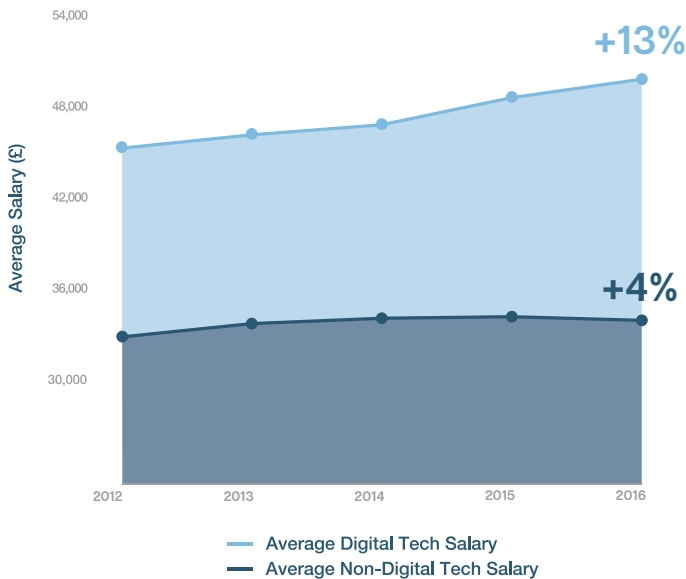*Source: BSD, Tech City UK, 2015*

MIND THE GAP / Digital tech salaries are outpacing all others

The average advertised digital tech salary in the UK during 2016 was £50,663. This is 44% higher than the average non-digital salary of £35,155. The gap between digital tech and non-digital salaries is not only wide, but it is growing.

Since 2012, there has been a 13% increase in the advertised salaries of digital tech jobs, compared with only a 4% increase in those of non-digital jobs. So while in 2012, digital tech salaries were 33% higher than non-digital ones, by last year the gap had widened to 44%.

Data-centric roles offer some of the highest salaries in the sector, with information security roles following close behind. Database architects and business intelligence architects are taking home some of the biggest pay cheques - last year the average advertised salaries for these roles were £67,624 and £62,758 respectively - reflecting the surge in businesses seeking to harness the power of their data.

Digital Tech vs. Non-Digital Tech Salary Growth (2012 – 2016)

Source: Burning Glass, Tech City UK, 2016

For people with the right digital tech skills there is clearly a wealth of opportunity across the UK. Unsurprisingly, the sector's highest advertised salaries are within the capital. London does not, however, have a monopoly on earning power. Over the past year, most clusters have seen digital tech salaries grow. Newcastle, Leeds and Sheffield have experienced particularly impressive growth at 46%, 30% and 28% respectively.
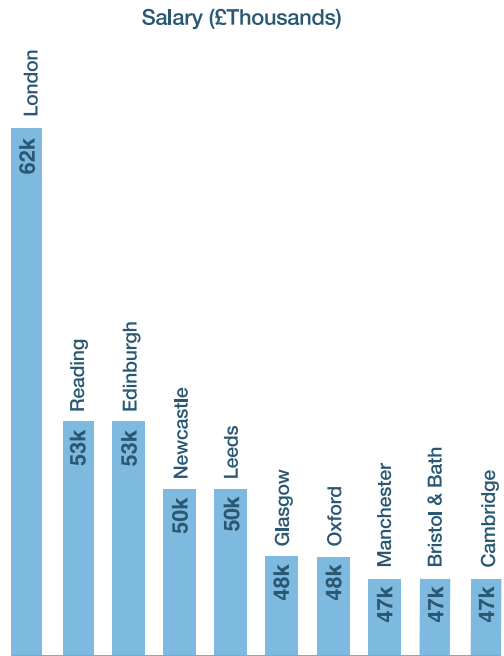
We know that digital tech salaries are almost double non-digital salaries. However, salaries only tell half the story. How far that money goes will also play its part in determining where people choose to base their digital tech businesses.

We asked the digital tech community how satisfied they were with the cost of living in their local area. The answers were revealing. Those employed in the three clusters that pay the highest salaries are less satisfied than the average.

In fact, the area that was most highly rated for cost of living was Hull. Digital tech salaries in this Yorkshire city may be the second lowest of all our 30 clusters, but those earnings still go further. For instance, Hull has a salary: house price ratio of just 3.2.
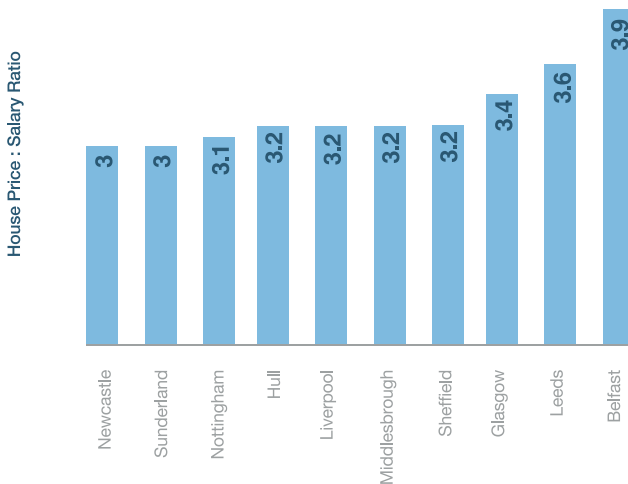
In short, those with digital tech skills might be starting to find themselves better off in locations they had not previously considered. Salaries may stretch much further in Newcastle or Nottingham than in London, Oxford or Brighton.

Top 10 Average Digital Salary (2016)

Salary (£Thousands)

City	Salary
London	62k
Reading	53k
Edinburgh	53k
Newcastle	50k
Leeds	50k
Glasgow	48k
Oxford	48k
Manchester	47k
Bristol & Bath	47k
Cambridge	47k

Source: Burning Glass, Tech City UK, 2016

Cluster Affordabiity House Price : Salary Ratio

House Price : Salary Ratio

City	Ratio
Newcastle	3
Sunderland	3
Nottingham	3.1
Hull	3.2
Liverpool	3.2
Middlesbrough	3.2
Sheffield	3.2
Glasgow	3.4
Leeds	3.6
Belfast	3.9

Source: Burning Glass, Land Registry

Digital Tech Jobs

THE SKILLS LANDSCAPE / Cambridge emerges as a European heavyweight

Our analysis of Github data gives us new insights into the distribution of digital tech expertise within the UK, as well as across Europe.

For example, outside of London, Cambridge has far higher numbers of Github users than any other UK cluster. In fact, with nearly 4,000 users, the city is ranked eighth in our Europe-wide rankings, meaning it is home to an impressive concentration of digital.

The highest numbers of Github users covering all the major languages are to be found in Cambridge, Manchester, Edinburgh and Newcastle, illustrating that these clusters boast a notable depth of programming talent.

Digital Tech Skills in 5 Leading Clusters – Gitbhub (2016)

	Javascript	Java	Python	PHP	Ruby
Cambridge	671	394	766	173	314
Manchester	441	214	168	286	209
Newcastle	343	203	213	138	248
Edinburgh	244	232	199	126	143
Bristol & Bath	345	169	170	154	104

Source: Github, Tech City UK, 2016

Digital Tech Skills

THE SKILLS SHORTAGE / Talent supply remains the number one challenge

We asked members of the UK's digital tech community about the challenges they face when it comes to running and growing their businesses.

Over 50% highlighted a shortage of highly skilled employees. In fact, nearly 25% described sourcing talent as a 'major challenge'.

This skills shortage is beginning to be reflected in wage negotiations too. Over a third of digital tech businesses said that candidates are asking for more money than they can afford to pay.

Meanwhile, 10% of digital tech businesses cite relocation and immigration challenges as a factor in their struggle to recruit. To continue to grow, digital tech businesses highlight that they need to be able to recruit the brightest and best workers from the UK and abroad.

Analysis of Office of National Statistics Annual Population Data shows that 7% of workers in the UK's digital tech economy are from non-EU nations, while 6% are from the EU (excluding Britain).

In total, some 13% of jobs in the digital tech sector are currently filled by international workers – up from 11% in 2011 and significantly higher than the 10% across the rest of the economy. London and the South East has attracted a high proportion of these international digital tech workers. The capital's digital tech economy is particularly international – EU workers hold 11% of jobs in London and non-EU nationals fill a higher proportion, at 20%[6].

Immigration aside, the current talent shortage could be significantly alleviated by encouraging more women into the digital tech sector.

Presently, women are severely under-represented. Our survey underscored the fact that UK digital tech companies rely on an overwhelmingly male workforce – women were in the majority for only one in nine (11%) digital tech companies. Indeed, in over half (53%) of these businesses, men outnumber women by at least three to one.

This is, of course, a highly complicated issue. Digital tech companies could do more to attract and retain women as well as to challenge stereotypes and cultural biases. Beyond this, however, lies a broader need to encourage women to embrace technology from a young age and to consider STEM careers.

[6]*This is based on analysis conducted for a Tech Nation UK report on immigration in the digital tech economy, published in April 2017.*
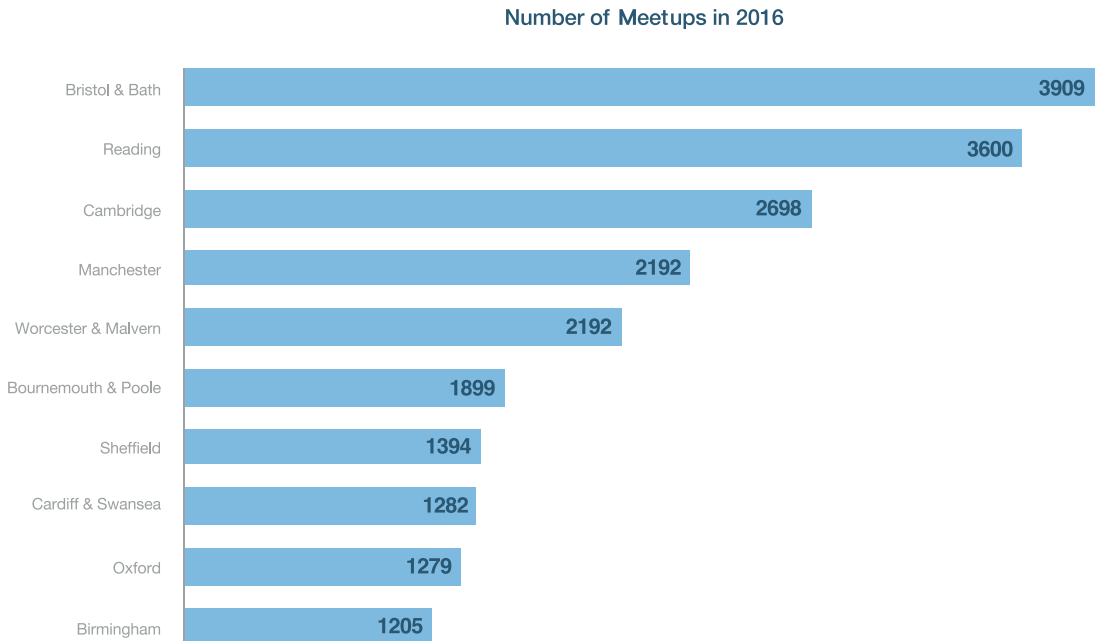
Digital Tech Ecosystems

ESSENTIAL ECOSYSTEMS / 85% of digital tech businesses rely on local support systems

Digital tech businesses interact with one another, and with other aspects of their local environment, in complex ways. The health and performance of each business is dependent upon the health and performance of the whole.

As we saw in our European analysis, Meetup data provides a good indication of the strength of local networks. Within the UK last year, the greatest number of Meetups outside London happened in Bristol & Bath. In fact, the largest concentration of JavaScript Meetups happened there too, and the same is true for PHP, Python and Java, indicating that this cluster is a networking powerhouse.

Digital Tech Meetups per Cluster (2016)

Number of Meetups in 2016

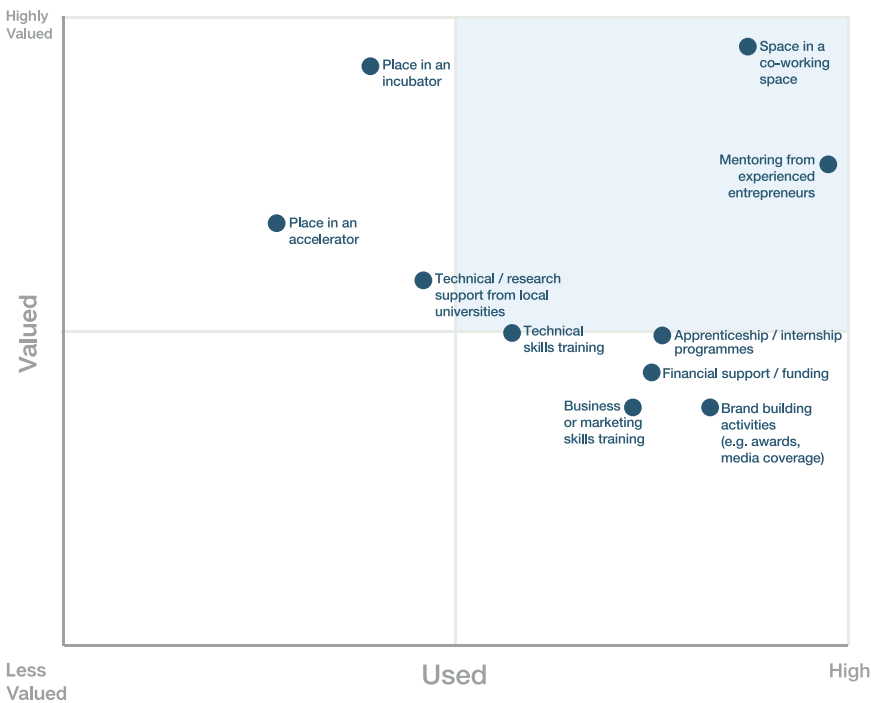| Cluster	Number of Meetups
Bristol & Bath	3909
Reading	3600
Cambridge	2698
Manchester	2192
Worcester & Malvern	2192
Bournemouth & Poole	1899
Sheffield	1394
Cardiff & Swansea	1282
Oxford	1279
Birmingham	1205

Source: Meetup, Tech City UK, 2016

Meetups are one part of an ecosystem – a pattern of support mechanisms and networks that tends to repeat across all successful digital tech clusters.

When we asked digital tech businesses across the UK which aspects of their local ecosystem they used, the three most popular responses were: mentoring, brand-building activities (e.g awards) and co-working spaces.

Only 15% of the digital tech businesses we surveyed had made no use at all of local support systems, highlighting just how important they have become.

Intriguingly however, the services that digital tech businesses use are not always those they claim to value most highly. As the analysis below shows, while incubator and accelerator services are valued highly, take-up for their services remains relatively low, suggesting that more could be done to promote and support them.

## How digital tech businesses use and value ecosystem services

Highly
Valued

Place in an incubator

Space in a co-working space

Mentoring from experienced entrepreneurs

Place in an accelerator

Technical / research support from local universities

Valued

Technical skills training

Apprenticeship / internship programmes

Financial support / funding

Business or marketing skills training

Brand building activities (e.g. awards, media coverage)

Less
Valued

Used

High

Source: Tech Nation 2017 Survey, Tech City UK, 2017

Digital Tech Ecosystems

STAYING CONNECTED / Over a quarter of digital tech businesses highlight poor digital infrastructure

Over a quarter (28%) of digital tech community members cited poor digital infrastructure as a business challenge. Perhaps surprisingly, this is not an exclusively rural issue. In fact, some of the highest proportions of dissatisfaction were in large cities such as Glasgow (where 55% say it is a challenge), Dundee (45%) and Brighton (42%).

Clusters where Digital Infrastructure was highlighted as a key business challenge

Cluster	%
Glasgow	55%
Dundee	45%
Brighton	42%
Norwich	42%
Ipswich	38%
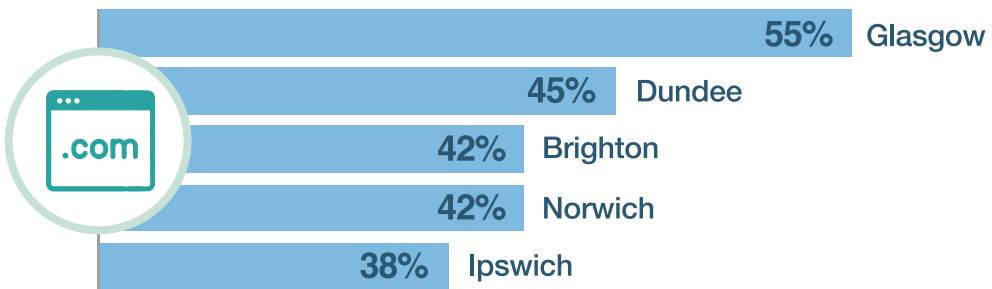
Source: Tech Nation 2017 Survey, Tech City UK, 2017

Clusters where transport infrastructure was rated as good

Meanwhile, nearly 30% of digital tech community members cited their local transport infrastructure as a business challenge. Here, however, cities did perform better. While over a third (36%) of respondents rated their local transport infrastructure as good, ratings tended to be higher in larger conurbations.

64% Nottingham

57% London

56% Dundee

56% Leicester

55% Edinburgh

20% Belfast

20% Bristol & Bath

12% Ipswich

11% Worcester & Malvern

9% Truro & Redruth

*Source: Tech Nation 2017 Survey.
Tech City UK, 2017*

Digital Tech Regional Investment

REGIONAL INVESTMENT / Investment across the UK

The shape of digital tech investment in the UK is changing. Last year, two-thirds (more than £4.6 billion) of such investment was recorded outside of the capital. That is more than 50% higher than investment outside of London in 2015.

Six clusters alone attracted nearly £700 million of investment between them in 2016: Edinburgh (£159 million), Cambridge (£153 million), Bristol & Bath (£109 million), Oxford (£106 million), Manchester (£78 million) and Sheffield (£61 million).

These figures testify to a diversifying investment landscape which, we believe, will provide a boost to regional economies and drive higher productivity across the nation.

Regional Digital Tech Investment as % of Total Investment (2012-2016)
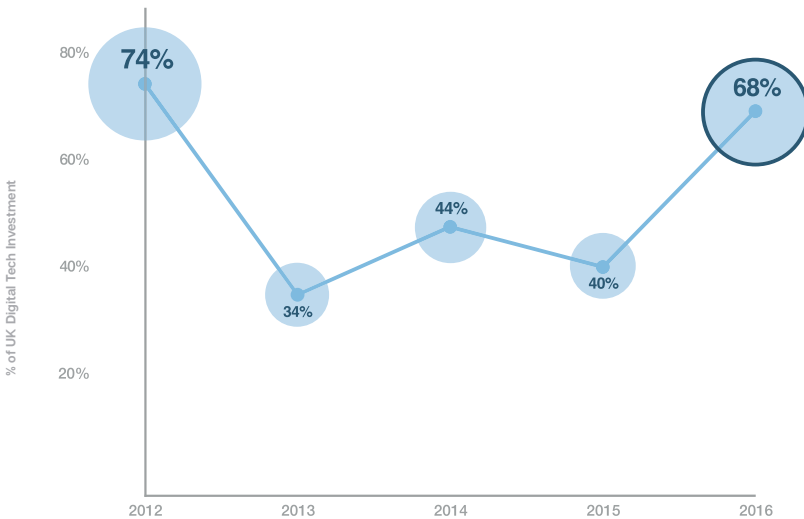
Source: Pitchbook, Tech City UK, 2016

£4.6BN

Tech investment outside of London was £4.6bn in 2016, 50% higher than in 2015

Digital Tech investment in Top 5 UK Clusters, excl London (2016)

2016 Investment (£Millions)

159M	Edinburgh
153M	Cambridge
109M	Bristol & Bath
106M	Oxford
78M	Manchester
61M	Sheffield
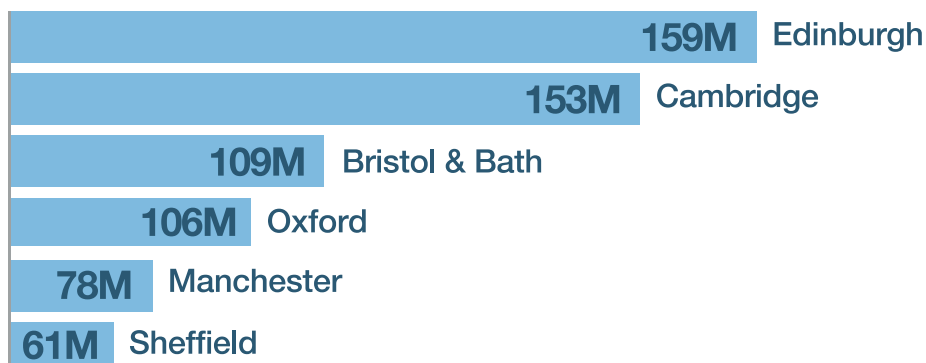
Source: Pitchbook, Tech City UK, 2016

However, although the distribution of investment is changing, limited opportunities to access finance remain an issue for a third (32%) of UK digital tech businesses. The issue is particularly pronounced amongst smaller businesses. Over two fifths (44%) of those with fewer than ten employees cite access to finance as a problem.

75%

Three-quarters of digital tech businesses in the UK are optimistic about their cluster's future

Conclusion

AN UPBEAT OUTLOOK / Three-quarters of people in the digital tech sector are optimistic about their cluster's growth

In our survey we asked members of each cluster to rate the strength of their local digital tech economy. Just over half characterised it as strong.

In three clusters (Bristol & Bath, Bournemouth & Poole and Brighton) this figure rose to around nine in ten people. At the opposite end of the spectrum the figure fell to between a quarter and a third of those working in Leicester, Birmingham and Southampton.

These are reasonably encouraging findings, though they do indicate significant regional variation when it comes to perceptions of the progress made in digital tech.

However, optimism for the future is high across the board. There was an overwhelmingly positive response when we asked respondents to rate their cluster's potential for growth. Over 75% rated theirs as 'good', while just 8% described it as 'poor'.

Those in Cambridge have the sunniest outlook, (95% saying that growth potential is 'good'), while at 92% the mood is almost as upbeat in Brighton, Leeds and Edinburgh.

Forging the future

SIX CATALYSTS FOR UK DIGITAL TECH GROWTH AND INNOVATION

There is overwhelming evidence that the UK's digital tech sector is critical to the nation's economic growth and nurturing this sector requires the collaboration of a great many stakeholders. Startups, scale-ups, universities, investors, the Government, local governments and corporates must all work together to build on the nation's successes, and to prepare for future challenges as the UK readies itself to leave the EU. We welcome the government's new Digital Strategy, which sets out a clear ambition for the UK to be a world-leading digital economy that works for everyone, and we look forward to working with government to deliver this.

The analysis in this report is based on the voices of over 2,700 digital tech founders and community leaders, and suggests six key areas on which productive collaborative working could be focused:

1 Skilling up for digital businesses
More than 50% of respondents highlighted the challenge of finding employees with the right skills. In fact, almost 25% characterised sourcing talent as a 'major challenge.' Steps are already being taken to address this shortage and equip the UK's workforce with the skills needed for roles in the digital tech sector. We suggest three areas of focus to further this agenda.

Equip young people for digital tech careers of the future through:
i. Education: Government reforms of the technical education system will see the creation of a specialist digital route, with employers setting standards and specifying the knowledge, skills and behaviours that individuals will need. Strong education models include the CyberFirst programme, Ada National College for Digital Skills and Cardiff University's National Software Academy. Other inspiring initiatives which are successfully equipping young people with the skills of the future include the Exeter Mathematics School, The Studio in Liverpool and École 42 in Paris.

ii. Engagement: Dorset's Digital Wave conference for schools, Norwich's #DigitalCity trail and nationwide TeenTech are all powerful examples of how to reach out to younger generations and inspire them to consider a career in digital tech. Young people can also be engaged through Code Clubs, learning programmes and mentoring programmes. Successful examples include Founders4Schools, Apps for Good, Young Founders, Fire Tech Camps and CoderDojo.

iii. Apprenticeships: Digital degree apprenticeships have already been introduced, and employers are collaborating with government in the development of 13 new digital apprenticeship standards, with more in the pipeline. We must continue to encourage apprenticeships for digital tech careers, learning from examples such as the NextGen Skills Academy and the social media apprenticeship scheme run by The Juice Academy. Increased transparency and accessibility would help to ensure employers are aware of the new digital tech standards. These can be found at: https://www.gov.uk/government/collections/apprenticeship-standards.

2 Gender diversity in the sector
UK digital tech is today comprised of an overwhelmingly male workforce. Our survey found that just one in nine digital tech companies has a majority of women in their workforce. In more than half (53%) of the organisations represented, men outnumber women by at least three to one. Work is already underway to redress the under-representation of women in the sector, by encouraging uptake in STEM subjects at GCSE, A-level and university. This should be continued (with commitment) while other initiatives are also explored, such as:
- Re-skilling women with digital tech skills through programmes such as Founders & Coders, Northcoders, Makers Academy and General Assembly. Some of the very best have high job success rates within three months of graduating.
- Businesses must commit to diversity in the sector - the Government's Tech Talent Charter which advises on best practice to encourage diversity is a good first step, and should be built upon.

3 Access to finance, at every stage of growth
Over 40% of digital tech founders or businesses told us that access to funding is a significant business challenge. Although not every company needs venture capital or loans to fuel their growth, improving access to capital can make all the difference to international competitiveness, especially for high growth companies. This could be achieved through:
- Nurturing and developing local angel networks - as well as exploring the opportunity to work with Government more closely to leverage private-

led funds (as and when appropriate).

• Patient Capital - the Chancellor's Autumn Statement was a step in the right direction and included £400 million of investment for continued support to ensure that the UK's digital businesses can scale. Also, to be welcomed is the Treasury-led review into barriers for accessing patient capital.

• Harnessing the power of universities - UK universities can provide crucial access to funding and practical business support for their students and alumni. Fine examples include Manchester Metropolitan's Innospace, UCL's Hatchery, Southampton University's Future Worlds, Sheffield University's Campus Capital and Cambridge Enterprise.

4 Boost digital connectivity

Almost one third (30%) of founders and CEOs said digital infrastructure continues to present a challenge. Investment is essential if businesses are to thrive and grow. In the UK, fixed internet traffic is now set to double every two years[1], whilst mobile data traffic will increase at a rate of between 25% and 42% per year[2]. In order to meet this rising demand we should continue to increase access to Ultra Fast Fibre to the Premises (FTTP), which can be achieved by encouraging alternative providers, such as Hyper Optic and Optimity, to expand into urban areas. Ways to improve access for rural areas must also be explored. The Government's recent announcement of £1 billion for this purpose (including full fibre and 5G), is a very promising sign. The UK must continue to exploit this considerable potential.

5 Attract the best and brightest global talent

Thirteen per cent of jobs in the digital tech sector are currently filled by international workers, and this rises to 31% in London and the South East[3]. The Government's ongoing support of the Tech Nation Visa is commendable and the recent 25% increase in capacity for the Tier 1 route is to be celebrated. As the UK begins the process of leaving the European Union, the tech sector has highlighted the importance of being able to recruit highly skilled staff from the EU and around the world. Businesses have made several suggestions for action in this area and the government and the tech sector should work closely together to

find the right approach for both non-EU and EU immigration. Tech City UK continues to work closely with the Home Office in order to help ensure that the UK continues to attract tech talent from all over the world.

6 Physical spaces for company formation and growth

Co-working spaces play a vital role in successful digital tech ecosystems. In fact, almost three-quarters (74%) of our survey respondents who had used co-working spaces rated them as useful. Tech City UK and the government should work together to support them.

Key Challenges Faced by Digital Tech Businesses
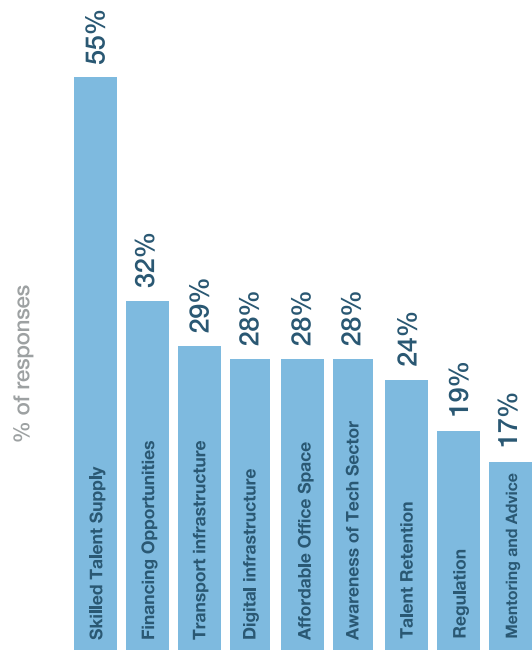
Source: Tech Nation Survey, 2017

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[1] *Fixed internet traffic worldwide: Forecasts and Analysis 2012 - 2018, Analysis Mason (2015).*
[2] *Mobile Data Strategy, Ofcom.*
[3] *This is based on analysis conducted for a Tech Nation UK report on immigration in the digital tech economy, due to be published in April 2017.*

Thoughts from Leaders in Digital Innovation

COMMENTS AND INSIGHTS ON ARTIFICIAL INTELLIGENCE, SCALE-UPS, DIGITAL INNOVATION, POLICY AND THE FUTURE OF THE WORLD WIDE WEB.

PROFESSOR DAME WENDY HALL, DBE FRS FRENG

**REGIUS PROFESSOR OF COMPUTER SCIENCE
DIRECTOR, WEB SCIENCE INSTITUTE
UNIVERSITY OF SOUTHAMPTON**

Q. Tell us about the work done at the University of Southampton's Web Science Institute.

The Web Science Institute, which was established in 2013, brings together world-leading interdisciplinary expertise to tackle the most pressing global challenges facing the World Wide Web and wider society today. It is necessarily interdisciplinary – as much about social and organisational behaviour as it is about the underpinning technology.

Q. What opportunities do you see in the Web's future?

The Web breaks down barriers between the human and the machine, enabling the evolution of so-called social machines that comprise both digital and human components – Wikipedia, Google, Facebook, Twitter and more recently Uber and AirBnB are all examples of social machines. We will see many more emerge as the Web continues to evolve.
Wikipedia demonstrates the power of collaborative intelligence, as communities identify and solve their own problems. This collective problem solving can be applied across society in health, transport, policy and city governance. For example, the Open City application aims to harness citywide participation in shared problems, exploiting common open data resources. Substantial research needs to be devoted to engineering layers of trust and provenance into Web interactions. The coming together of our digital and physical personas presents opportunities for progress, such as the integration of financial, medical and educational services. But it is also an opportunity for cyber crime. Web science can enhance the good and remove the bad.

Q. How can digital tech businesses ensure their work has a positive social impact on society?

Increasingly, companies are viewing positive social impact as good for their business and, with encouragement from government and business leaders, the concept has become mainstream. The Web contributes to this by increasing companies' transparency through online platforms and social networks. This encourages dialogue between the company, suppliers, customers, government and society. It's all about trust.

PROFESSOR MARIANA MAZZUCATO

DIRECTOR OF THE INSTITUTE FOR INNOVATION AND PUBLIC PURPOSE, UNIVERSITY COLLEGE LONDON AND AUTHOR, THE ENTREPRENEURIAL STATE

Q. Which policies would you single out for their success in driving digital tech growth?

Innovative firms need long-term finance. Recently, there have been attempts at providing such patient finance via the SBRI programme—a good idea that needs to be linked to government procurement policy to make more impact. The UK also lacks a dynamic public bank focused on innovation and scaling up for small firms. The lack of patient finance acts as a brake on the UK tech sector. One, often overlooked, factor in the history of the UK tech sector is the BBC—its catalytic role, and the resulting spillovers, have been critical to the sector's success.

Q. How do we ensure innovation remains strong during this period of uncertainty?

As I argued in evidence to the BEIS inquiry (Government Department for Business, Energy and Industrial Strategy), what we need are mission-oriented policies, of the scale of the moon shot programme, that catalyse innovation across many sectors addressing major technological and social challenges. Sectoral policies cannot achieve this but missions around 'green' and 'care' could drive innovation across many sectors.

Q. What makes a successful ecosystem?

The key lesson from Silicon Valley is the need for a decentralised network of public actors, across the entire innovation chain, interacting dynamically with the private sector. In my book I called this 'The Entrepreneurial State'. This includes funding linkages between basic and applied science, patient finance for innovative firms, and demand side policies enabling full diffusion and deployment of new technologies across the economy.

SHERRY COUTU CBE

ENTREPRENEUR, NON-EXEC DIRECTOR, INVESTOR AND ADVISER TO COMPANIES UNIVERSITIES AND CHARITIES

Q. Why are scale-ups so important for a healthy ecosystem?

Because they create most of the jobs – OECD research shows that young, or growing, companies produce 100% of the net new jobs across Europe. So making sure that our ecosystem is conducive to companies that are growing is super important, particularly given that large companies, on average, are shrinking. Probably even more important, though, is that job satisfaction levels are found to be much higher in scale-up companies than other categories of companies (small, medium, or large companies, or professional services firms).

Q. What can government and UK digital tech leaders do to help more startups become scale-ups?

First and foremost they can buy stuff from them! Second, they can make sure that others can identify them, so that scale-ups can more easily attract the people they need to hire, and the finance they need to expand overseas.

Q. What are the biggest challenges that scale-ups face?

Finding people with the right skills to hire, and selling to large corporates.

Q. What support is available for scale-ups in the UK?

That's the wrong question. Scale-ups don't need or want 'support'. They want the barriers that prevent them from achieving their ambitions removed, starting with an adequate talent supply and access to people who have 'been there done that'.

**WENDY TAN-WHITE MBE
GENERAL PARTNER
& ZOE JERVIER
GLOBAL DIRECTOR OF TALENT**

ENTREPRENEUR FIRST

Q. Could you tell us about the work you do at Entrepreneur First (EF)?

EF invests in top technology talent to help them build world-class, deep technology startups from scratch in London and Singapore. We are the world's leading company-builder and we co-invest in our companies with a £40 million fund.
Since 2011, EF has created more than 100 startups worth over $400 million, including Magic Pony Technology which exited to Twitter for $150 million, Tractable, StackHut, Pi-Top, OpenCosmos, Status Today and Cloud NC.

Q. EF specialises in artificial Intelligence (AI) and machine learning. Where do you see this sector going in the next few years?

Google's Eric Schmidt said that machine learning will be the basis of 'every huge IPO' in the next five years.
The most important thing for an AI startup is being clear what real world problem they are solving and for which market. Just having cool tech is not enough. However, the opportunities are endless. We see AI and machine learning companies disrupting every sector, from fintech to manufacturing.

Q. Where do your current companies come from?

For each cohort we conduct a worldwide search for the best talent across multiple continents. Typically, 50% of applicants come from outside the UK. Our data shows us that our reach spans over 200 university research departments and some of the biggest business ecosystems in the US, Europe and Asia.

**Q. Is EF looking to expand its operations in the UK?**

While our operational HQ remains in London, we spend a lot of time in other regions where there is a high concentration of engineering talent. Within the UK we continue to build our presence in Edinburgh, Cambridge, Oxford and Bristol.

> " The most important thing for an AI startup is being clear about what real world problem they are solving and for which market. Just having cool tech is not enough. "

TECH NATION 2017
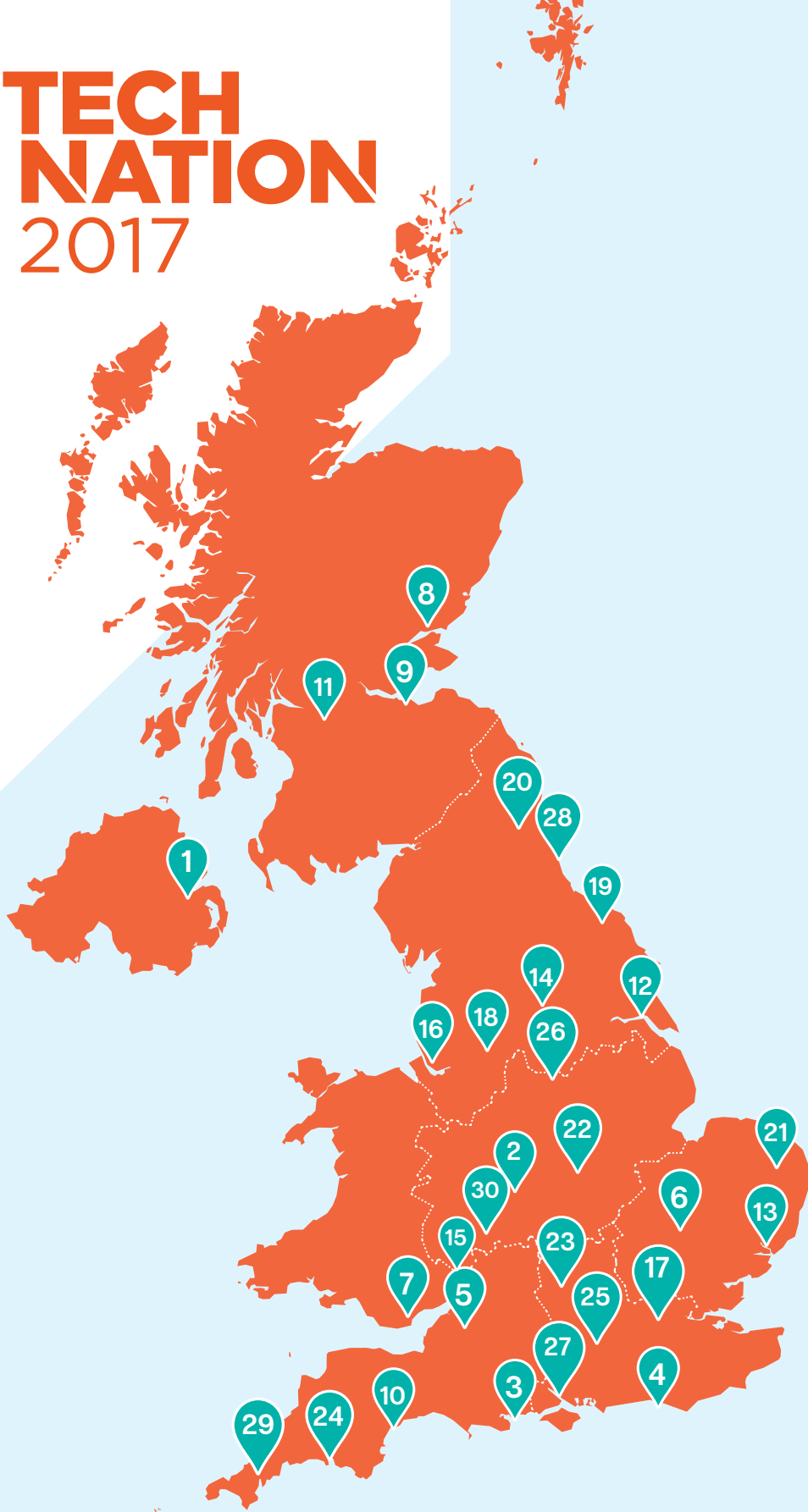
Profiling the UK Digital Landscape

Belfast

NOTABLE UNIVERSITIES
QUEEN'S UNIVERSITY BELFAST
UNIVERSITY OF ULSTER

NOTABLE ACCELERATORS
START PLANET NI
ENTREPRENEURIAL SPARK

NOTABLE WORKSPACES
INNOVATION FACTORY
FARSET LABS
CATALYST INC

NOTABLE MEETUPS & FESTIVALS
DIGITAL CIRCLE
INTERNET OF THINGS ALLIANCE
BELFAST STARTUPS HUB

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
With two universities producing high quality graduates, a strong digital tech community, low cost of living and desirable property prices, Belfast is an increasingly attractive place to start – and grow – a digital tech company.

Once famed for aerospace and shipbuilding, the city now has the highest density of fibre in Europe. Its connectivity goes beyond broadband. Good air and rail connections link it to Dublin, London and further afield.

Invest NI offers support to early stage startups while access to finance is improving through the work of local angel network HALO and funds such as techstartNI and the Invest Growth Fund.

WHAT'S NEW?
Kainos is working with the Land Registry to build its LLC Register, consolidating local authority registers into a single, digital register. Catalyst Inc, (formerly the Northern Ireland Science Park), unveiled its 10 year plan to develop one million square feet of office space and to create 5,000 jobs.

WHAT'S NEXT?
One of Europe's biggest cyber security conferences, OWASP's AppSec EU, comes to Belfast in May in recognition of the city's status as a leading cluster in cyber security.

Many more cyber security multinationals are likely to move to Belfast. They will be joining the likes of Alert Logic and Black Duck Software, which have both expanded operations in the city in 2016.

New co-working spaces are opening up to support Belfast's success. Ormeau Baths is set to open soon, and new sites are opening at the Forthriver Business Park – a major redevelopment programme built on the site of the old Mackie's engineering plant.

OFFICE RENT[1]
£19sq/ft

AVERAGE HOUSE PRICE[2]
£148,125

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
33%

QUALITY OF LIFE
67%

DIGITAL GROWTH OPTIMISM
61%

TRANSPORT INFRASTRUCTURE
20%

SIMON REA
Head of Product
B-Secur

WHAT WE DO
B-Secur is the next generation in biometric authentication - securing devices, apps and data with ECG technology. We use a person's unique heartbeat electrical wave to authenticate them against a stored profile.

WHY BELFAST?
Belfast is a cybersecurity hub within the UK. The partnership we have developed with the Centre for Secure Information Technologies at Queen's University has been hugely significant. We have been able to work alongside some of the brightest minds in the UK as we develop our pioneering technology.

GAWAIN MORRISON
Co-Founder & CEO
Sensum

WHAT WE DO
Sensum is an emotional insights and AI company. At our core is a platform for capturing and analysing data from people and the world around them, in real time, to derive emotional insights. Ultimately all of our work helps brands to understand their audience better and create exciting and engaging content, products, and experiences.

WHY BELFAST?
Being Belfast based has enabled us to evolve as a company that looks 'into the bubble' objectively, rather than be caught up in it. This has allowed us to build a distinctive brand so we stand out from more corporate organisations in the marketplace. At our heart we're a company of creative adventurers and we're incredibly proud of our roots!

GROWTH CHALLENGES

42%
LIMITED HIGHLY SKILLED WORKERS

38%
LIMITED INVESTMENT OPPORTUNITIES

34%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

25%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
9,058

ADVERTISED DIGITAL SALARY
£37,785

ADVERTISED NON-DIGITAL SALARY
£28,782

DIGITAL BUSINESS CONCENTRATION
0.49 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£531 million

HIGH-GROWTH DIGITAL BUSINESSES[4]

17.5%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

128
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011-15)

DIGITAL BUSINESS COUNT

+37%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Birmingham

NOTABLE UNIVERSITIES
UNIVERSITY OF BIRMINGHAM
BIRMINGHAM CITY UNIVERSITY
ASTON UNIVERSITY

NOTABLE WORKSPACES
ASSAY STUDIOS
ALPHA WORKS
CUSTARD FACTORY

NOTABLE MEETUPS & NETWORKS
SILICON CANAL
TECH WEDNESDAY

NOTABLE INVESTORS
TURN PARTNERS
OXYGEN INVESTORS
ASCENSION VENTURES

WHAT'S THERE?

Long the centre of the UK's automotive industry, today's Birmingham has a skilled workforce, to support the emergence of new technologies such as drones and intelligent buildings.

The arrival of big banks, professional services firms and the planned HS2 rail link, have all accelerated this transformation.

The cluster is bolstered by 18 universities, all within an hour's drive of the city. Increasingly, graduates are also staying to put down roots, attracted by the affordable quality of life, opportunities and a thriving digital tech ecosystem.

Local networks, such as Silicon Canal and Innovation Birmingham, are instrumental to the cluster's strength. Support from Finance Birmingham, who provide loan funding and equity finance of between £250,000 and £2 million, continues to drive growth.

WHAT'S NEW?

Last year, 6,016 people moved to Birmingham from London, more than to any other UK city. Part of the city's attraction is an increasing supply of jobs: Advanced Computer Software Group, for example, announced the creation of 400 more last year.

New workspaces for digital and creative businesses are opening such as Assay Studios which opened in 2016 which is home to Deliveroo, and John Lewis's new Tech Hub for Innovation.

WHAT'S NEXT?

Alpha Works, a collaborative space aimed at startups, will open its doors later this year.

Meanwhile, HM Revenue & Customs plans to open a regional hub in the city creating 3,000 more jobs in 2019. Another 1,200 jobs are predicted to come from the return of HSBC's head office to Birmingham.

TECH NATION 2017
From **TECH CITY**

OFFICE RENT[1]
£32sq/ft

AVERAGE HOUSE PRICE[2]
£183,665

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
25%

QUALITY OF LIFE
80%

DIGITAL GROWTH OPTIMISM
67%

TRANSPORT INFRASTRUCTURE
52%

RICH WESTMAN
Managing Director
Kaido Group Ltd

Kaido

WHAT WE DO
Kaido Group Ltd is a pioneering digital tech, health business. We combine artificial intelligence with the actual intelligence of health professionals to turn health data into actionable insights that are useful at both the clinician and patient level.

WHY BIRMINGHAM?
Birmingham's diverse population, newly established QE Hospital and world leading health research capabilities make it an attractive life sciences region.

JOHN SHERMER
Managing Director
LightwaveRF

Lightwave RF

WHAT WE DO
LightwaveRF is one of the UK's fastest growing smart home technology manufacturers, pioneering affordable retrofit lighting, power, energy monitoring and heating solutions. Each of our devices is quick and easy to fit, uses standard connections, and can be controlled via smartphone from anywhere.

WHY BIRMINGHAM?
We benefit from good national and international transport links (we have a lot of international staff) and being centrally located really helps as we frequently have business in London and installations across the UK. Proximity to the NEC is useful as we attend lots of exhibitions. We have also had close ties with Warwick University in the past.

GROWTH CHALLENGES

61%
LIMITED HIGHLY SKILLED WORKERS

56%
LIMITED INVESTMENT OPPORTUNITIES

43%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

30%
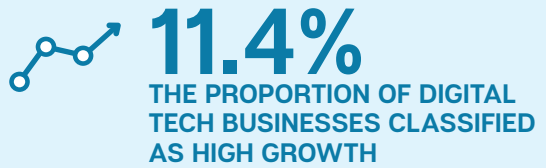LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
36,802

ADVERTISED DIGITAL SALARY
£43,718

ADVERTISED NON–DIGITAL SALARY
£34,455

DIGITAL BUSINESS CONCENTRATION
0.78 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£1.4 billion

HIGH-GROWTH DIGITAL BUSINESSES[4]

11.4%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS*

557
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+33%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Bournemouth & Poole

NOTABLE UNIVERSITIES
BOURNEMOUTH UNIVERSITY |
ARTS UNIVERSITY BOURNEMOUTH |

NOTABLE FESTIVALS
BFX |
SILICON BEACH |
DIGITAL WAVE |

NOTABLE MEETUPS & NETWORKS
MEETDRAW |
OPEN SAUCE |
VIRGIN START-UP |

NOTABLE WORKSPACES
THIS WORKSPACE |
BARCLAYS EAGLE LABS |
BOX 44 |

TECH NATION 2017
From **TECH CITY**

WHAT'S THERE?
The seaside town of Bournemouth, home to digital creative agencies and big ambitions, is now making waves in education, healthcare and transport too.

Its success is powered by strong graduate talent from the highly acclaimed National Centre for Computer Animation and Visual Effects at the University of Bournemouth, and an increasingly dynamic ecosystem.

WHAT'S NEW?
More than 1,000 students attended the Digital Wave digital careers conference last year, learning from and networking with inspiring speakers who could become their future employers.

In September 2016, a new accelerator was launched by Creative England and Silicon South. Called First Bourne, its mentors include representatives of the leading digital companies in Bournemouth – such as Amuzo and Bright Blue Day. Skills in the city are also being supported by Digital Horizons, which aims to help students enter the digital tech industries.

Meanwhile, digital and creative agencies such as Salad Creative go from strength to strength, as do the cluster's healthtech startups such as Nourish. New co-working spaces are opening up to support this success – THIS Group, for example, have opened a 24/7 creative hub.

WHAT'S NEXT?
Plans are afoot to create a city-wide programme of events, following the huge success that festivals and social events have had in the area. Silicon Beach, for example, expanded into London last year, while the town's Meetdraw Meetup event drew in more than 900 people.

The big news, however, is that Ordnance Survey and Bournemouth Council are testing a 5G mapping and planning tool in the town. Improved connectivity could unlock huge potential across the city.

OFFICE RENT[1]
£16sq/ft

AVERAGE HOUSE PRICE[2]
£263,631

[1] JLL property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
44%

QUALITY OF LIFE
95%

DIGITAL GROWTH OPTIMISM
91%

TRANSPORT INFRASTRUCTURE
46%

CHRIS BAINBRIDGE
Founder & Creative Director
Make Studio

MakeStudio

WHAT WE DO
We are a creative experience agency, driven by design to help to connect brands on a human level. We deliver strategy, creativity and UX across brand and identity, campaign creation, digital design, motion graphics, CGI, VR and film.

WHY BOURNEMOUTH & POOLE?
Bournemouth is an area where property and architectural development complement all of our internal services. Plus, a good quality of life helps to build a great culture while we remotely serve our growing client base throughout Europe. We also have close transport links to get to our London and Dutch offices easily and within a few hours.

TOM QUAY
CEO & Founder
Base

BASE

WHAT WE DO
We help organisations to refine digital tech product ideas, (mobile apps, websites, IoT, wearables, APIs), through prototypes and user testing, and then develop the commercial models, production versions and marketing strategy that help them to succeed.

WHY BOURNEMOUTH & POOLE?
Bournemouth is a vibrant coastal town with easy access to both London by train and Manchester by plane. This provides a combination of beach living with the infrastructure needed to get in front of customers. The talent pool here is mature too, both from the university and those looking for a better work life balance.

GROWTH CHALLENGES
48%
LIMITED HIGHLY SKILLED WORKERS

42%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

23%
RETENTION OF SKILLED WORKERS

17%
LIMITED INVESTMENT OPPORTUNITIES

DIGITAL TECH ECONOMY JOBS
15,763

ADVERTISED DIGITAL SALARY
£39,508

ADVERTISED NON–DIGITAL SALARY
£29,141

DIGITAL BUSINESS CONCENTRATION
0.44 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£352 million

HIGH–GROWTH DIGITAL BUSINESSES[4]

26%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

199
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+16%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Brighton

NOTABLE UNIVERSITIES
UNIVERSITY OF BRIGHTON
UNIVERSITY OF SUSSEX

NOTABLE WORKSPACES
THE SKIFF
THE WERKS GROUP
FUSEBOX

NOTABLE MEETUPS & FESTIVALS
BRIGHTON DIGITAL FESTIVAL
DCONSTRUCT
BRIGHTON SEO

WHAT'S THERE?

Brighton is where the arts fuse with technology. The seaside city is home to a plethora of digital advertising and marketing agencies, design studios and gaming studios.

Its strengths, however, are developing across the digital tech spectrum, supported by talent from the University of Sussex as well as Wired Sussex, a membership organisation which acts as a hub and initiator for the digital tech community.

What's more, the city is awash with events – hackathons, skills swaps and Meetups happen every day across the city.

WHAT'S NEW?

Brighton's gaming sector is going from strength to strength as small studios, including offshoots of Black Rock, expand. Studio Gobo has launched a second mobile development studio, while West Pier has expanded its team to 30. The Brighton Games collective co-working space, meanwhile, is helping to foster new talent and support freelancers.

There is more to Brighton than gaming, however. Online accountancy firm Crunch saw its turnover expand by 34% from 2015 to 2016 and was featured in The Sunday Times Tech Track 100 list of fastest-growing technology companies.

WHAT'S NEXT?

Perhaps unsurprisingly in a city that is home to successful festivals like dConstruct and Brighton Digital Festival, tickets to last year's Brighton SEO sold out within 13 minutes. Now, the UK's biggest search marketing event is looking for a bigger venue for 2017.

TECH NATION 2017
From **TECH CITY**

OFFICE RENT[1]
£26.5sq/ft

AVERAGE HOUSE PRICE[2]
£419,019

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
42%

QUALITY OF LIFE
93%

DIGITAL GROWTH OPTIMISM
92%

TRANSPORT INFRASTRUCTURE
27%

GILES PALMER
Founder & CEO
Brandwatch

brandwatch

WHAT WE DO
Brandwatch is the world's leading social intelligence company. Our flagship products, Brandwatch Analytics and the Vizia platform, fuel smarter decision making for more than 1,200 brands and agencies, including Unilever, Whirlpool, British Airways, Asos, Walmart and Dell.

WHY BRIGHTON?
There's a kind of quirkiness and a collaborative element to Brighton, as well as a 'look after each other' attitude that's a big part of our culture. Being in Brighton has helped to maintain those parts of our character which are aligned to the town.

ALEX VAIDYA
Co-Founder & CEO
StoryStream

STORY STREAM

WHAT WE DO
StoryStream removes the complexity from the management of content, so marketers can focus on creating engaging, in-the-moment brand stories for customers.

Our smart content platform enables marketers to optimise the use of both user and brand-generated content at scale and across multi-channel touchpoints to drive customer engagement and conversions.

WHY BRIGHTON?
Brighton thrives on a vibrant and creative environment. Organisations such as Wired Sussex foster an excellent ecosystem of digital, media and technology talent which young digital tech startups like us can draw from.

GROWTH CHALLENGES
53%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

47%
POOR TRANSPORT INFRASTRUCTURE

42%
LIMITED DIGITAL INFRASTRUCTURE

35%
LIMITED HIGHLY SKILLED WORKERS

DIGITAL TECH ECONOMY JOBS
12,614

ADVERTISED DIGITAL SALARY
£44,608

ADVERTISED NON-DIGITAL SALARY
£33,513

DIGITAL BUSINESS CONCENTRATION
0.92 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£580 million

HIGH-GROWTH DIGITAL BUSINESSES[4]
18.5%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS
218
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT
+29%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER
+31%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Bristol & Bath

NOTABLE UNIVERSITIES
UNIVERSITY OF BRISTOL
UNIVERSITY OF BATH
UNIVERSITY OF THE WEST
OF ENGLAND
BATH SPA UNIVERSITY

NOTABLE COMPANIES
IBM
HEWLETT-PACKARD
JUST EAT

NOTABLE MEETUPS & FESTIVALS
TECHSPARK
HIGH TECH BRISTOL & BATH
VENTUREFEST
TECHIE BREKKIE
BRISTECH

NOTABLE WORKSPACES
ENGINE SHED
BRISTOL & BATH SCIENCE PARK
THE GUILD

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
With technical expertise in aerospace and a history of microchip design, Bristol and Bath's burgeoning digital tech cluster has deep roots.

Global businesses from these sectors are based in the region, including Meiko, picoChip and XMOS. Successes like these led Cray to set up its European HQ in Bristol.

Digital skills are developed at the region's four well-respected universities. Spinouts from them are numerous, including wireless specialists PowerWave and materials specialists NanoGaN. Meanwhile, The Bristol Robotics Laboratory is now the UK's leading academic centre for robotics research.

WHAT'S NEW?
The strength of the cluster's robotics sector was illustrated by a multimillion investment in GraphCore, while Future Space hub has also opened, attracting UK robotics stars.

Game Boosters launched at the Engine Shed, while the latter also created Silicon Gorge, a network attracting investment for local digital tech startups.

The 'Crowd10' campaign is helping companies to crowdfund growth capital and the University of Bristol launched the first round of their seed fund, UOBEF.

WHAT'S NEXT?
Bristol has been chosen by Oracle to host one of its new global Startup Cloud Accelerators. Digital tech entrepreneurs are looking forward to the completion of Unit DX, a new lab space and science incubator.

Meanwhile, the region's aerospace industry is integrating new technology capabilities to create the next generation of aircraft, with Airbus launching a £40 million Wing of the Future Centre.

OFFICE RENT[1]
£27sq/ft

AVERAGE HOUSE PRICE[2]
£315,523

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
41%

QUALITY OF LIFE
92%

DIGITAL GROWTH OPTIMISM
88%

TRANSPORT INFRASTRUCTURE
20%

HENRY NURSER
CEO & Founder
Blu Wireless Technology Limited

BLU WIRELESS TECHNOLOGY

WHAT WE DO
Blu Wireless develops and licenses unique wireless technology to major household names, and is fast becoming the default 'engine' to enable 5G telecom networks.

WHY BRISTOL & BATH?
A high quality of life, heritage in engineering excellence and strong links to world-respected academic institutes make Bristol and Bath a perfect environment in which to build a knowledge-based company such as Blu Wireless.

TOM CARTER
Co-founder & CTO
Ultrahaptics

ultrahaptics

WHAT WE DO
Engaged with the world's biggest companies to revolutionise how we interact with our devices, Ultrahaptics enables people to feel virtual objects without needing to touch anything or wear special equipment.

WHY BRISTOL & BATH?
Being based in Bristol, we have access to a large pool of leading digital tech talent. We also have close links to the strong ecosystem, having originally developed within the University of Bristol and SETsquared, the global #1 tech incubator.

GROWTH CHALLENGES
70%
LIMITED HIGHLY SKILLED WORKERS
42%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS
32%
LIMITED INVESTMENT OPPORTUNITIES
28%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
35,924

ADVERTISED DIGITAL SALARY
£47,063

ADVERTISED NON–DIGITAL SALARY
£34,562

DIGITAL BUSINESS CONCENTRATION
4.35 (very high)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£1.7 billion

HIGH–GROWTH DIGITAL BUSINESSES[4]

17.4%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

225
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+23%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+87% GROWTH 2011 - 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Cambridge

NOTABLE UNIVERSITIES
UNIVERSITY OF CAMBRIDGE
ANGLIA RUSKIN UNIVERSITY

NOTABLE COMPANIES
ARM
SAMSUNG
QUALCOMM

NOTABLE INVESTORS
CAMBRIDGE ANGELS
AMADEUS CAPITAL PARTNERS LTD
CAMBRIDGE INNOVATION CAPITAL

NOTABLE MEETUPS & NETWORKS
CAMBRIDGE NETWORK
CAMBRIDGE WIRELESS
AGRI-TECH EAST

NOTABLE WORKSPACES
JOHN BRADFIELD CENTRE
ST JOHN'S INNOVATION CENTRE
IDEASPACE INCUBATOR

TECH NATION 2017
From TECH CITY

WHAT'S THERE?
With a world-leading university, the country's most mature technology ecosystem, and the presence of major multinationals, Cambridge is a leading digital tech cluster.

The city has produced some of the UK's most successful businesses: from Acorn Computers in 1978 and Solexa in 1997, to SwiftKey in 2008, Raspberry Pi in 2012 and Darktrace in 2013. The university city is also home to the games studios Jagex and Frontier Developments, as well as many data-driven life science businesses.

WHAT'S NEW?
Last year, Amazon used Cambridge as a testing ground for its experimental drone delivery service Prime Air, while Apple opened an AI lab in the city, after acquiring a University spinout. What's more, Imperial College opened a facility on the Babraham Research Campus and Cambridge-based chipmaker ARM was acquired by Japan's SoftBank Group.

Cambridge Enterprise Seed Funds hit an all-time investment high, funnelling £5.3 million into 14 promising companies. The organisation, which helps university students and staff to commercialise their ideas, is just one of many support organisations offered by the university and the wider community. Tracing back to 1960, with the launch of Cambridge Consultants, today key organisations include Cambridge Angels, St John's Innovation Centre, Cambridge Network, ideaSpace incubator and Allia Future Business Centre.

WHAT'S NEXT?
The newest addition to the Cambridge ecosystem, the John Bradfield Centre, will open this spring to incubate science and tech entrepreneurs.

The university continues to build its already world-leading reputation in machine learning and further industry disrupting spinouts will continue to form.

OFFICE RENT[1]
£36sq/ft

AVERAGE HOUSE PRICE[2]
£522,820

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
72%

QUALITY OF LIFE
92%

DIGITAL GROWTH OPTIMISM
95%

TRANSPORT INFRASTRUCTURE
10%

RAMSEY FARAGHER
CEO & Founder
Focal Point Positioning

Focal Point
POSITIONING

WHAT WE DO
Focal Point Positioning is redefining the state-of-the-art in satellite positioning systems such as GPS, on low-cost devices like smartphones. Our software upgrade to GPS chips is able to solve some of the hardest challenges in position navigation, such as generating position fixes indoors and in dense urban environments.

WHY CAMBRIDGE?
Being based in Cambridge gives us access to well-motivated and highly-talented individuals, as well as a rich community of successful and established "Silicon Fen" entrepreneurs who can provide invaluable guidance and contacts.

FIONA NIELSEN
CEO & Founder
Repositive

REPOSITIVE

WHAT WE DO
Repositive is an essential portal that helps researchers to access human genomic data and connect with the research community. By facilitating faster access to data, Repositive assists the diagnosis of genetic diseases and accelerates the development of precision medicine.

WHY CAMBRIDGE?
Cambridge is fast becoming the Silicon Valley of the UK, dubbed the "Silicon Fen". It has an abundance of both web development and biotech talent, and with the London digital tech scene just a 55 minute train trip away, we couldn't be better situated.

GROWTH CHALLENGES

54%
LIMITED HIGHLY SKILLED WORKERS

46%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

35%
POOR TRANSPORT INFRASTRUCTURE

29%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
30,219

ADVERTISED DIGITAL SALARY
£46,730

ADVERTISED NON-DIGITAL SALARY
£34,651

DIGITAL BUSINESS CONCENTRATION
1.79 (high)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£867 million

HIGH-GROWTH DIGITAL BUSINESSES[4]
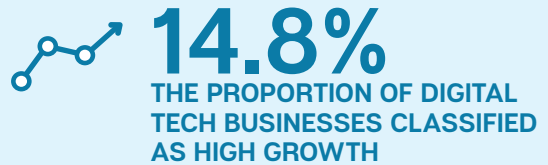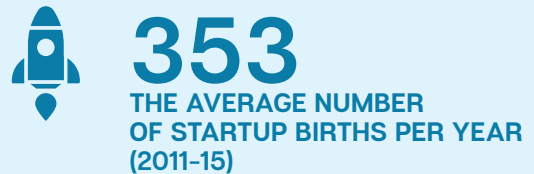
14.8%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

353
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+20%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+30%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Cardiff & Swansea

NOTABLE UNIVERSITIES
CARDIFF UNIVERSITY |
UNIVERSITY OF SOUTH WALES |
SWANSEA UNIVERSITY |

NOTABLE WORKSPACES
TECHHUB SWANSEA |
TRAMSHED TECH |
INDYCUBE |

NOTABLE MEETUPS & NETWORKS
DIGITAL TUESDAY |
NORTH WALES TECH |
CARDIFF START |

WHAT'S THERE?
The Welsh economy may have been built on coal, but Cardiff & Swansea are now building an impressive digital tech cluster.

Cardiff University's National Software Academy is producing work-ready software engineering graduates and the Alacrity Foundation is nurturing the next generation of entrepreneurs. Meanwhile, Innovation Point helps to drive growth and Cardiff Start, Wales's largest startup community, connects entrepreneurs.

The burgeoning digital tech sector is fueled by robust infrastructure, excellent universities and competitive costs. Only two hours from London, it is attracting an increasing number of businesses.

WHAT'S NEW?
Last year, the UK Government announced an annual £10 million of Government support until 2020/21 for a new Compound Semiconductor Applications Catapult based in Cardiff.

The University of South Wales, in collaboration with Innovation Point, launched the National Cyber Security Academy to educate highly-skilled cyber security graduates for the future.

WHAT'S NEXT?
The Welsh Government's 'Superfast' programme offers connection to next-generation broadband, with connectivity spreading at a pace across Wales. The £1.28 billion Cardiff Capital Region City Deal plans include a world-class metro system and a series of measures aiming to drive digital innovation across South East Wales.

Not content with that, the Swansea Bay City Region's £500 million deal aims to transform the region into a digital super-hub building on the strengths of the local University and Tidal Lagoon. Finally, the Development Bank of Wales, due to launch this year, will provide more than £1 billion of investment support to Welsh business.

TECH NATION 2017
From **TECH CITY** UK

OFFICE RENT[1]
£21sq/ft

AVERAGE HOUSE PRICE[2]
£185,639

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
31%

QUALITY OF LIFE
89%

DIGITAL GROWTH OPTIMISM
76%

TRANSPORT INFRASTRUCTURE
26%

CHRIS GANJE
Co-founder & CEO
AMPLYFI

ΛMPLYFi

WHAT WE DO
AMPLYFI is a leading Cardiff-based startup that has developed an artificial intelligence software platform, DataVoyant. By leveraging all open-source data in the Surface and Deep Web, DataVoyant is set to revolutionise the business intelligence sector.

WHY CARDIFF & SWANSEA?
We have tremendous support from core components of the Welsh innovation ecosystem: investment from Finance Wales, funding from the Welsh Government, backing by NatWest's accelerator Entrepreneurial Spark, and access to some of Europe's most successful entrepreneurs.

RICHARD THEO
CEO & Founder
Wealthify

wealthify

WHAT WE DO
Wealthify is a major player in the exciting new robo-investing sector, offering a low-cost alternative to traditional investing. We are an easy, affordable online investment service open to anyone who wants to start investing.

WHY CARDIFF & SWANSEA?
Cardiff is a fast-growing centre of excellence in fintech. There's a strong and growing community of small digital tech startups in the area – reflected in the number of shared working spaces across the city. This has created a supportive environment for startups.

GROWTH CHALLENGES

46%
LIMITED HIGHLY SKILLED WORKERS

41%
LIMITED INVESTMENT OPPORTUNITIES

35%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

33%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
17,471

ADVERTISED DIGITAL SALARY
£43,459

ADVERTISED NON–DIGITAL SALARY
£32,696

DIGITAL BUSINESS CONCENTRATION
0.42 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£392 million

DIGITAL-TECH STARTUP BIRTHS[4]

103
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+28%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+10%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Dundee

NOTABLE UNIVERSITIES
ABERTAY UNIVERSITY
UNIVERSITY OF DUNDEE

NOTABLE WORKSPACES
FLEET COLLECTIVE
DUNDEE MAKERSPACE
DUNDEE UNIVERSITY INCUBATOR

NOTABLE INVESTORS
ALLIANCE TRUST
ARCHANGELS

NOTABLE MEETUPS & FESTIVALS
CREATIVE DUNDEE
NEON DIGITAL ARTS FESTIVAL
DUNDEE TECH MEETUP

WHAT'S THERE?

Dundee is home to a thriving games sector – in fact the world's fastest selling game, Grand Theft Auto, was developed here by DMA Design.

Many other indie developers are based in the city, from Denki and Biome Collective to Outplay Entertainment – the city's largest developer with more than 150 employees.

Abertay University and its Centre for Excellence in Computer Games Education turn out a healthy supply of graduates each year. This year marks two decades since Abertay University became the first in the world to offer a degree-level qualification in computer games development.

Close links have been forged between the creative and digital sectors too. Take NEoN Digital Arts Festival, for example, or Fleet Collective, a co-working space and agency bringing together the art, design and publishing sectors.

WHAT'S NEW?

2016 saw Dundee selected to run the UK Games Fund programme, in recognition of the city's excellence in games development. Meanwhile, Creative Dundee, a network organisation supporting the creative and digital sectors, launched its digital platform.

Collaborations with spinouts from the University of Dundee's renowned life sciences department are on the rise. Examples include 'Play to Cure: Genes in Space' a free mobile game using players to analyse real genetic data.

WHAT'S NEXT?

Developments include the £1 billion transformation of Dundee City Waterfront. At the heart of this development, is the V&A Museum of Design, due to open in 2018. The museum will run a design-led business innovation strand, which will act as a design and innovation hub.

TECH NATION 2017

From **TECH CITY**

AVERAGE HOUSE PRICE[1]
£146,391

[1]Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
46%

QUALITY OF LIFE
91%

DIGITAL GROWTH OPTIMISM
86%

TRANSPORT INFRASTRUCTURE
56%

COLIN ANDERSON
Managing Director
Denki

WHAT WE DO
Denki is Dundee's longest-established independent game developer, having released over 150 games for more than 30 of the world's biggest brands since opening in 2000.

WHY DUNDEE?
Dundee has a renowned history of pioneering creative industries and continues to attract talent from all over the world. This has made the area fertile soil for establishing and growing new creative businesses, such as computer game development.

CHRIS MARTIN
CEO
Waracle

WHAT WE DO
Waracle is one of the UK's largest and most experienced mobile and IoT specialists. We work with some of the largest UK and European companies across industries including fintech, digital health and energy. Waracle is part of the Exception Ltd Group.

WHY DUNDEE?
Waracle has been able to grow throughout the UK with the strong support of our Dundee, Glasgow and Edinburgh teams. Creativity and innovation thrive in these cities. The talent that comes from the leading computer science universities, including Dundee, Abertay, Glasgow, Strathclyde and Heriot-Watt, has enabled us to keep pushing for leading-edge mobile apps and IoT developments.

GROWTH CHALLENGES
60%
LIMITED HIGHLY SKILLED WORKERS

45%
LIMITED DIGITAL INFRASTRUCTURE

40%
POOR TRANSPORT INFRASTRUCTURE

40%
RETENTION OF SKILLED WORKERS

DIGITAL TECH ECONOMY JOBS
3,571

ADVERTISED DIGITAL SALARY
£36,323

ADVERTISED NON–DIGITAL SALARY
£30,310

DIGITAL BUSINESS CONCENTRATION
0.69 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[2]
£97 million

DIGITAL TECH STARTUP BIRTHS

34
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+16% **INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15**

DIGITAL BUSINESS TURNOVER

+171% **GROWTH 2011 – 2015**

[2] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Edinburgh

NOTABLE UNIVERSITIES
UNIVERSITY OF EDINBURGH |
HERIOT-WATT UNIVERSITY |
EDINBURGH NAPIER UNIVERSITY |

NOTABLE INVESTORS
SCOTTISH EQUITY PARTNERS |
PENTECH VENTURES |
PAR EQUITY |

NOTABLE WORKSPACES
TECHCUBE |
CODEBASE |
THE MELTING POT |
CREATIVE EXCHANGE |

WHAT'S THERE?
Edinburgh is the UK's second-largest financial centre, and also a leading digital tech cluster. It is home to major international companies and unicorns such as Skyscanner and FanDuel. It has three world-class universities, with the University of Edinburgh's globally renowned School of Informatics producing an impressive number of spinouts in recent years.

CodeBase, the UK's largest technology incubator is based in the city, and there is a highly supportive digital community. Edinburgh is also a great city to live in. Rich in culture and history, it has good travel links and its relatively small size makes it the perfect microcosm in which entrepreneurs can test their products.

WHAT'S NEW?
Last year, Edinburgh won Entrepreneurial City of the Year Award.

A new co-working space called Codesk was established within the city's first incubator Techcube, with a remit to help small businesses tap into wider professional networks. CodeClan, an accredited digital skills academy, opened its doors too, aiming to produce job-ready software developers after a 16-week course.

Finally, Skyscanner, (which was founded in Edinburgh in 2003), was sold to Chinese tourism group Ctrip for £1.4 billion.

WHAT'S NEXT?
The Scottish Government's newly launched CivTech initiative aims to initiate cooperation between private sector innovation, public organisations and citizen groups. A hugely successful pilot saw them welcoming eight companies to tackle sector specific challenges, and their next cohort will begin this autumn.

TECH NATION 2017
From **TECH CITY**

OFFICE RENT[1]
£31sq/ft

AVERAGE HOUSE PRICE[2]
£294,277

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
45%

QUALITY OF LIFE
95%

DIGITAL GROWTH OPTIMISM
92%

TRANSPORT INFRASTRUCTURE
55%

GARETH WILLIAMS
CEO & Co-founder
Skyscanner

skyscanner

WHAT WE DO
Skyscanner is a global metasearch engine for information on the World Wide Web that enables people to find comparisons for flights, hotels and car hire.

WHY EDINBURGH?
While we have ten offices across the world, including London and Barcelona, Skyscanner started life in Edinburgh. The thriving digital tech scene in Edinburgh is hugely supportive and collaborative, with a strong sense of camaraderie.

JUDE COOK
CEO & Co-founder
ShareIn

WHAT WE DO
We believe investment should happen online. We provide both a digital tech and compliance service that lets you connect with your network and raise capital. Combined client transactions by volume make us one of the largest crowdfunding operators in the UK and we continue to grow at a rapid pace.

WHY EDINBURGH?
We are proud to be based in CodeBase, the UK's largest tech incubator in the heart of Edinburgh. They have been vital in giving us our first steps into the world of business. The team there are an invaluable, trusted source of knowledge. They're genuine operators – people who've been there and done it. They understand the highs and the lows of startup life and can help to navigate the journey. Being based in Edinburgh we've also been able to tap into world-class talent coming out of the local universities.

GROWTH CHALLENGES
61%
LIMITED HIGHLY SKILLED WORKERS

39%
LIMITED INVESTMENT OPPORTUNITIES

21%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

21%
RETENTION OF SKILLED WORKERS

DIGITAL TECH ECONOMY JOBS
25,109

ADVERTISED DIGITAL SALARY
£53,019

ADVERTISED NON–DIGITAL SALARY
£37,070

DIGITAL BUSINESS CONCENTRATION
0.23 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£513 million

HIGH–GROWTH DIGITAL BUSINESSES[4]

16.8%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

363
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+34%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 - 15

DIGITAL BUSINESS TURNOVER

+85%
GROWTH 2011 - 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Exeter

NOTABLE UNIVERSITIES
UNIVERSITY OF EXETER |

NOTABLE WORKSPACES
EXETER SCIENCE PARK |
CORKSCREW |
THE GENERATOR |

NOTABLE MEETUPS & NETWORKS
TECHEXETER |
DIGITAL EXETER |
CASTLE DEMOS |

NOTABLE ACCELERATORS
SETSQUARED PARTNERSHIP |
EXETER CITY FUTURES |

WHAT'S THERE?
Devon's cathedral city has big plans. It is witnessing more digital tech firms moving in and more startups launching.

The Met Office has been headquartered here since 2003, while Crowdcube, the UK's leading crowdfunding platform, is based at the University of Exeter's Innovation Centre.

Another supportive hub exists at the Exeter Science Park. Incubators include Being There, a robotics collaboration between five universities. Exeter City Futures is also active in the city. Meanwhile, Exeter Mathematics School is delivering skills for the future. The highly acclaimed school requires students to study maths and either physics or computer science at A level.

WHAT'S NEW?
A lot happened in Exeter last year. Perhaps most exciting was the building of the Met Office's new £97 million supercomputer. In 2016, ExeterWeb became TechExeter, a community with more than 600 members, and held its first conference. TechExeter's sister community Digital Exeter is also growing steadily.

Elsewhere, Cyber Security Awareness Week was launched complementing the work of the South West Cyber Security Cluster at Exeter Science Park. Exeter's largest co-working space the Generator also expanded by popular demand.

WHAT'S NEXT?
In April 2017, Space Apps will come to Exeter in collaboration with the Met Office to solve challenges set by NASA.

Like Minds conference returns to Exeter in September after travelling to Bristol, London and New York. What's more, plans proposed by Westwood and the Eden Project will engage the agritech and foodtech industry in Exeter.

TECH NATION 2017
From **TECH CITY**

OFFICE RENT[1]
£18.5sq/ft

AVERAGE HOUSE PRICE[2]
£263,439

[1] JLL property data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
22%

QUALITY OF LIFE
98%

DIGITAL GROWTH OPTIMISM
79%

TRANSPORT INFRASTRUCTURE
31%

JIM STRONG
Founder & Director
Geo.me

WHAT WE DO
Selected as Google's first UK Partner for Maps in 2009, we create Google-accredited, high quality solutions, (site locators, asset tracking and business intelligence maps), for global organisations, all delivered from our world-class mapping platform.

WHY EXETER?
The South West has a deep pool of skilled talent, good quality of life and great value for money too. There is also a great networking community for building relationships.

JOEL STOBART
CTO & Co-founder
Custodian Solutions

WHAT WE DO
Custodian Solutions build collaborative cloud platforms to fight counterfeiting. Our technology empowers enterprises to take effective co-ordinated action against counterfeiters who cause suffering to consumers and damage brands.

WHY EXETER?
Exeter is the most technology-loving city in the UK. It's beautiful, with a strong community, adventure on tap, and a pool of engaged talent. The city enables our innovation with support of world-leading incubators like SETsquared.

GROWTH CHALLENGES
65%
LIMITED HIGHLY SKILLED WORKERS

35%
LIMITED INVESTMENT OPPORTUNITIES

32%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

30%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
14,018

ADVERTISED DIGITAL SALARY
£38,204

ADVERTISED NON–DIGITAL SALARY
£29,481

DIGITAL CONCENTRATION
0.47 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£150 million

DIGITAL TECH STARTUP BIRTHS[4]

82
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+18% INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+30% GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Glasgow

NOTABLE UNIVERSITIES
UNIVERSITY OF STRATHCLYDE |
UNIVERSITY OF GLASGOW |
GLASGOW SCHOOL OF ART |

NOTABLE WORKSPACES
THE HUB |
ROOKIEOVEN |
THE TONTINE |

NOTABLE MEETUPS & NETWORKS
GLASGOW PHP |
MAKLAB |
CODE CRAFT |

NOTABLE COMPANIES
HEWLETT-PACKARD |
JP MORGAN |
BRIGHTREE |

WHAT'S THERE?

Once an industrial powerhouse, Scotland's largest city is now a digital tech heavyweight where business, trade and investment flourish.

Glasgow's universities, and the University of Strathclyde in particular, provide a rich seam of talent. Strathclyde has formed more than 50 spinout companies with annual sales of £80 million.

A wide range of digital tech sectors are represented in the city, from fintech and e-commerce, to social networking and enterprise software. Space technology is also taking off, as evidenced by Alba Orbital, Spire and Clyde Space.

The city's startups and entrepreneurs are well supported by co-working spaces such as RookieOven, Meetups including Glasgow PHP, and organisations like Creative Clyde, which aims to promote Glasgow's creative industries.

WHAT'S NEW?

During its tenure as the official European Entrepreneurial Region of 2016, Glasgow witnessed the establishment of new tech festival Techaus and new co-working space Think Tank. What's more, CodeClan, Scotland's digital skills academy also expanded into the city.

Meanwhile, iconic building The Tontine has been reinvented as a centre for technological innovation, as part of a £1.13 billion Glasgow infrastructure deal. The Tontine is expected to support the development of 134 high-growth companies over five years.

WHAT'S NEXT?

Glasgow city centre will be home to Scotland's first city Innovation District. Bringing business, academia and government together to grow the health, life sciences and engineering sectors. The district will be co-located at Strathclyde University's Technology & Innovation Centre, Scottish Enterprise's Innovation Building and the Tontine Building.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£29.5sq/ft

AVERAGE HOUSE PRICE[2]
£166,070

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
32%

QUALITY OF LIFE
88%

DIGITAL GROWTH OPTIMISM
81%

TRANSPORT INFRASTRUCTURE
44%

DR GRAEME MALCOLM
CEO & Founder
M Squared Lasers

M SQUARED

WHAT WE DO
Fast growth photonics technology company M Squared designs precision lasers for scientific and commercial applications. The company also undertakes extensive R&D into future technologies in areas such as quantum computing, medical research and the detection of chemical warfare agents.

WHY GLASGOW?
M squared lasers are produced at our Glasgow headquarters and shipped all over the world. Since the invention of the first rangefinder during WW1, Glasgow has been a centre of excellence for optical imaging and lasers. M Squared benefits from the region's wealth of experienced scientists and partners.

TOM WALKINSHAW
CEO & Founder
Alba Orbital Ltd

alba orbital

WHAT WE DO
Alba Orbital design and build PocketQubes – the smallest satellites in the world. Even smaller than the more widely available CubeSats, these reduce the cost of access to space for companies and academia alike.

WHY GLASGOW?
Glasgow has an abundance of skilled graduates and professionals, which has led to three satellite companies being located here. Having the right people on your doorstep is a key competitive advantage.

GROWTH CHALLENGES
55%
LIMITED HIGHLY SKILLED WORKERS
55%
POOR TRANSPORT INFRASTRUCTURE
55%
LIMITED DIGITAL INFRASTRUCTURE
44%
LIMITED INVESTMENT OPPORTUNITIES

DIGITAL TECH ECONOMY JOBS
25,992

ADVERTISED DIGITAL SALARY
£48,404

ADVERTISED NON–DIGITAL SALARY
£32,803

DIGITAL BUSINESS CONCENTRATION
0.54 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£591 million

HIGH–GROWTH DIGITAL BUSINESSES[4]
19.2%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS
331
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT
+33%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER
+32%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Hull

NOTABLE UNIVERSITIES
UNIVERSITY OF HULL

NOTABLE COMPANIES
TRIDENT
ESP SYSTEX
SMITH & NEPHEW

NOTABLE FESTIVALS
HULL AND EAST YORKSHIRE'S
DIGITAL AWARDS

NOTABLE WORKSPACES
CENTRE FOR DIGITAL
INNOVATION – C4DI

NOTABLE MEETUPS & NETWORKS
CODEPEN
HULL PIXELBOT
HULL DIGITAL

TECH NATION 2017
From **TECH CITY**

WHAT'S THERE
The 2017 UK City of Culture has a burgeoning reputation as the epicentre of East Yorkshire and North Lincolnshire's digital tech community.

Digital tech startups are taking seed here in growing numbers, for example Sypro and Ash.TV. Established digital businesses, such as Trident and the ESP Group, call Hull home too.

Driving this growth is the £4 million Centre for Digital Innovation (C4DI). Opened in 2015, it provides co-working space, tech incubation, and corporate innovation. Major digital music distributors Label Worx are based here.

Hull's high-speed connectivity (it is the only city in the UK not served by BT) is helpful too – full fibre is available to more than half its businesses and homes, a significantly higher proportion than the national average.

Hull University, recently launched Viper – a university-wide High Performance Computing cluster – and has doubled the number of computer science graduates over the past three years.

WHAT'S NEW?
Hull and East Yorkshire's Digital Awards are now running annually to celebrate and promote the sector, while IT@Spectrum and The One Point have opened new headquarters at the Bridgehead Business Park, offering their £2.75 million facilities to help other local businesses to learn and grow.

WHAT'S NEXT?
CityFibre has named Hull the UK's next 'Gigabit City' and is rolling out ultra-fast connectivity in partnership with Pure Broadband.

Meanwhile, Hull's first University Technical College is due to open in September. The £10 million school will specialise in digital technology and mechatronics – the combined study of computing and engineering.

AVERAGE HOUSE PRICE[1]
£113,319

[1]Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
45%

QUALITY OF LIFE
71%

DIGITAL GROWTH OPTIMISM
70%

TRANSPORT INFRASTRUCTURE
23%

ALEX YOUDEN
Director
NFire Labs

WHAT WE DO

NFire Labs is changing the way 3D printers are used in schools and businesses. We're making 3D Printing as easy as possible to access by offering a complete package with the machine, consumables, maintenance and support included.

WHY HULL?

Being located at the C4DI in Hull has enabled NFire Labs to grow and expand far quicker than imagined. The support, the contacts and the community all combine to create the perfect storm for startups!

JOHN POLLING
Director
sauce

{ s a u c e }

WHAT WE DO

Sauce is a mobile development team that designs and builds long-term, scalable platforms for our clients. Work includes information portals, IoT products, and internal business products across a range of industries.

WHY HULL?

By basing ourselves at C4DI – the heart of digital tech in Hull – we've directly benefited from the investment in digital. Our City of Culture status, high standard of living and tradition of entrepreneurialism create a vibrant place for digital tech startups.

GROWTH CHALLENGES

47%
LIMITED HIGHLY SKILLED WORKERS

35%
POOR TRANSPORT INFRASTRUCTURE

30%
LIMITED INVESTMENT OPPORTUNITIES

30%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

DIGITAL TECH ECONOMY JOBS
6,914

ADVERTISED DIGITAL SALARY
£34,895

ADVERTISED NON–DIGITAL SALARY
£30,365

DIGITAL BUSINESS CONCENTRATION
0.92 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[2]
£254 million

DIGITAL TECH STARTUP BIRTHS

72
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+21%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+2%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Ipswich

NOTABLE UNIVERSITIES
UNIVERSITY OF SUFFOLK |

NOTABLE COMPANIES
BT |
CISCO |
HUAWEI |

NOTABLE MEETUPS & NETWORKS
SIMS |

NOTABLE ACCELERATORS
TECHEAST |
INNOVATION MARTLESHAM |
IPSWICH WATERFRONT |
INNOVATION CENTRE (IWIC)

WHAT'S THERE?

Telecoms are top dog in Ipswich. BT's Global Research & Development Campus, Adastral Park, employs more than 3,000 people. Former BT employees have gone on set up successful businesses in the area, including Sharedband and Zog Energy.

Also based at Adastral Park is Innovation Martlesham, a cluster of more than 90 high-tech ICT companies, which also runs its own ICT business incubator.

WHAT'S NEW?

In August 2016, University Campus Suffolk became the University of Suffolk, fully independent from the University of East Anglia (UEA) and the University of Essex.

The University of Suffolk is expanding its STEM provision and has established the Ipswich Waterfront Innovation Centre, offering support to entrepreneurs and ICT businesses. It also hosts the Ipswich Games Hub, which will work with computer design students to develop entrepreneurial skills.

BT launched the Tommy Flowers Institute at Adastral Park. The institute will focus on bringing ICT-sector organisations together with academic researchers exploring areas, such as cyber security, big data, autonomics and converged networks.

New Anglia Local Enterprise Partnership has launched both a micro grant scheme, and a new co-investment fund, New Anglia Capital, providing match funding with angel investors.

WHAT'S NEXT?

The British Robotics Seed Fund, newly launched at Adastral Park, will invest in a dozen promising robotics startups from across the UK each year. Meanwhile, a £4 million project, Innovation Bridge, is being launched to deliver advice and grants to SMEs across the east of England.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£12.5sq/ft

AVERAGE HOUSE PRICE[2]
£201,734

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
22%

QUALITY OF LIFE
87%

DIGITAL GROWTH OPTIMISM
61%

TRANSPORT INFRASTRUCTURE
12%

PAUL BENSLEY
Managing Director
X-on

WHAT WE DO
X-on creates and delivers smart and secure telecoms to finance companies and healthcare providers including BUPA, Care UK and GP surgeries nationally. X-on combines close working with clients with extensive technical experience of cloud-based contact centres to deliver its solutions.

WHY IPSWICH?
X-on's location in Suffolk means we can access the City of London in one hour, while providing staff with space to think and breathe without the cost of city dwelling.

MARK THOMAS
Technical CEO
Coderus

WHAT WE DO
International software company Coderus specialises in embedded and mobile application solutions for brands including Bowers & Wilkins and Land Rover BAR. Coderus hosts the East's annual Google, Apple and Microsoft live-stream events.

WHY IPSWICH?
Being based at Adastral Park – BT's R&D campus just outside Ipswich– has been one of the keys to our success. Ipswich offers-low cost offices, access to highly skilled talent, great connectivity with London and a positive work/life balance.

GROWTH CHALLENGES
51%
LIMITED HIGHLY SKILLED WORKERS

40%
POOR TRANSPORT INFRASTRUCTURE

38%
LIMITED DIGITAL INFRASTRUCTURE

28%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

DIGITAL TECH ECONOMY JOBS
9,981[3]

ADVERTISED DIGITAL SALARY
£41,025

ADVERTISED NON-DIGITAL SALARY
£30,456

DIGITAL BUSINESS CONCENTRATION
0.33 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[4]
£163 million

DIGITAL TECH STARTUP BIRTHS

91
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+2% INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+27% GROWTH 2011 – 2015

Leeds

NOTABLE UNIVERSITIES
UNIVERSITY OF LEEDS
LEEDS TRINITY UNIVERSITY
LEEDS BECKETT UNIVERSITY

NOTABLE COMPANIES
FIRST DIRECT
SKY PLC
ROCKSTAR LEEDS

NOTABLE MEETUPS & NETWORKS
LEEDS HERD
GLUG
LEEDS DIGITAL DRINKS

NOTABLE WORKSPACES
FUTURELABS
DUKE STUDIOS

WHAT'S THERE?
Leeds is home to some of the UK's biggest digital rock stars, Rockstar Games was founded in the city in 1997.

Other big names here include Sky Betting and Gaming, Sky Technology, Callcredit and NHS Digital.

Digital agencies such as Stickyeyes, Epiphany and twentysix are growing ever stronger. Exciting local startups and scale-ups are also emerging. These include Cocoon, a company that is re-imagining home security systems, and Ten10 one of the UK's leading software testing companies.

The Leeds University backed SPARK programme supports student entrepreneurs, while Futurelabs, Duke Studios, Leeds Beckett Digital Hub and ODI Leeds provide space and networking opportunities.

WHAT'S NEW?
Leeds Digital Jobs Fair had its inaugural event in 2016, hosting 33 companies and 1,300 attendees. The annual Leeds Digital Festival has also kicked off to celebrate and promote the area's digital talent, and Hyve News was launched to promote the digital tech sector in Leeds.

Meanwhile, academies run by Sky Betting and Gaming, Sky Technology and William Hill continue to attract talented graduates.

WHAT'S NEXT?
A £3.7 million grant from Leeds City Council will be divided between innovative tech projects, and Creative England backed Gameslab Leeds will continue to support games studios in the area.

Tech companies, universities and the Council have launched a digital skills action plan with intensive boot camps and degree-level apprenticeships being rolled out in 2017.

TECH NATION 2017
From **TECH CITY UK**

OFFICE RENT[1]
£27.5sq/ft

AVERAGE HOUSE PRICE[2]
£179,870

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
28%

QUALITY OF LIFE
84%

DIGITAL GROWTH OPTIMISM
92%

TRANSPORT INFRASTRUCTURE
29%

RICHARD FLINT
CEO
Sky Betting & Gaming

sky BET

WHAT WE DO
Sky Betting & Gaming is a Sunday Times Top 100 employer and a fast-growing Yorkshire unicorn, headquartered in Leeds. It employs more than 1,000 people and contributed 18% of Leeds' digital GVA in 2014/15.

WHY LEEDS?
We love being in such a great city – it's full of talented and ambitious people seeking a fulfilling career, which helps to support our continued job creation plans.

OMAIR VAIYANI
CTO & Co-Founder
Synap

synap

WHAT WE DO
Synap is one of the world's most intelligent study tools, using machine-learning to optimise knowledge retention. With Synap, students can find revision material on any topic, including premium materials from publishers such as Oxford University Press.

WHY LEEDS?
Leeds has a thriving digital tech scene - being based here gives us great access to the universities, and to thousands of talented graduates looking to work in an innovative startup.

GROWTH CHALLENGES

74%
LIMITED HIGHLY SKILLED WORKERS

45%
RETENTION OF SKILLED WORKERS

36%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

34%
POOR TRANSPORT INFRASTRUCTUR

DIGITAL TECH ECONOMY JOBS
23,734[3]

ADVERTISED DIGITAL SALARY
£50,041

ADVERTISED NON–DIGITAL SALARY
£34,005

DIGITAL BUSINESS CONCENTRATION
0.44 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[4]
£688 million

HIGH–GROWTH DIGITAL BUSINESSES[5]
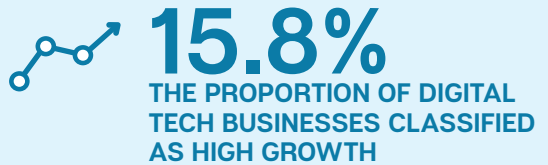
15.8%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

314
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+29%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+14%
GROWTH 2011 – 2015
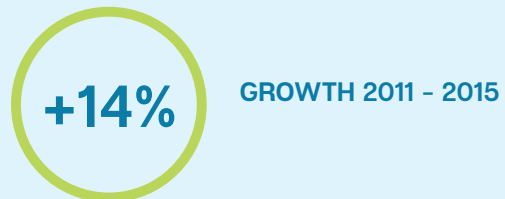
[3] 2016 Tech Nation Report
[4] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[5] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Leicester

NOTABLE UNIVERSITIES
UNIVERSITY OF LEICESTER
DE MONTFORT UNIVERSITY

NOTABLE WORKSPACES
DOCK
LCB DEPOT
PHOENIX SQUARE

NOTABLE MEETUPS & NETWORKS
LEICESTER STARTUP WEEKEND
START-UP DMU
LEICESTER TECH STARTUPS

WHAT'S THERE?

Leicester, the city where tourism was invented, is now buzzing with digital tech innovation too.

The city's Cultural Quarter, home to its historic textiles industry, is being transformed into a hub for creative and digital tech startups. Here you will find workspaces such as LCB Depot and Phoenix Square, while beyond the city centre, the Dock acts as a hub for more than 50 high-tech businesses.

The University of Leicester boasts an award-winning data centre, a high performance computing research lab and offers support for spinout companies. De Montfort University's Innovation Centre is also central to Leicester's digital tech scene. Home to a range of tech and retail startups, it hosts support services, seminars and events as well as its startup society, established in 2015.

Meanwhile, Leicester Tech Startups supports the digital tech community beyond the universities. A group created by entrepreneurs for entrepreneurs, it signposts the various lectures, hackathons and Meetups going on in the area.

WHAT'S NEW?

The largest ever Leicester Startup Weekend was held in February, including a hackathon, workshops and a series of talks.

WHAT'S NEXT?

A promising initiative which aims to establish a city centre co-working space with collaboration from Leicester City Council, University of Leicester and De Montfort University.

What's more, plans have been announced for a new enterprise zone covering three key industrial sites in Leicester and Loughborough. The Leicester Waterside site will build on the city's reputation for space science. The enterprise zone aims to create 21,000 jobs and generate £123 million over the next 25 years.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£15.5sq/ft

AVERAGE HOUSE PRICE[2]
£169,079

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
6%

QUALITY OF LIFE
88%

DIGITAL GROWTH OPTIMISM
44%

TRANSPORT INFRASTRUCTURE
56%

SIMON CLEAVER
CEO
CloudCall

CloudCall
smarter communications

WHAT WE DO
CloudCall is a global provider of cloud-based communications. Its passion is to create integrated communications software that empowers users to engage and interact intuitively with their customers.

WHY LEICESTER?
Being in Leicester provides CloudCall with the right environment to thrive. It gives us access to incredibly talented people who have enabled us to build and offer a world-class product and service.

SOPHIE HAINSWORTH & JASON NESBITT
Co-founders
LoyalFree

WHAT WE DO
LoyalFree is a mobile phone app loyalty scheme which is used to collect rewards at local independent businesses. This allows businesses to gain from customer analytics and brand exposure.

WHY LEICESTER?
Building the business in our home town of Leicester has given us access to many great startup initiatives at the universities and through other institutions in the city.

GROWTH CHALLENGES
40%
LIMITED HIGHLY SKILLED WORKERS
40%
LIMITED INVESTMENT OPPORTUNITIES
20%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY
20%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
23,173

ADVERTISED DIGITAL SALARY
£40,131

ADVERTISED NON-DIGITAL SALARY
£30,780

DIGITAL BUSINESS CONCENTRATION
0.39 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£437 million

HIGH-GROWTH DIGITAL BUSINESSES[4]
11.9%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS
244
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT
+24%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Liverpool

NOTABLE UNIVERSITIES
UNIVERSITY OF LIVERPOOL
LIVERPOOL JOHN
MOORES UNIVERSITY
LIVERPOOL HOPE UNIVERSITY

NOTABLE ACCELERATORS
SANTANDER INCUBATOR
SPARK UP

NOTABLE WORKSPACES
BALTIC CREATIVE CIC
ELEVATOR STUDIOS
LAUNCH22

NOTABLE MEETUPS & NETWORKS
BALTIC SOCIAL
LIVERPOOL GIRL GEEKS
CREATIVE KITCHEN

WHAT'S THERE?

Liverpool is enjoying a renaissance, powered by the digital tech companies that operate within the city - in particular those that cluster around the Baltic Triangle district.

Here, gaming, virtual reality and digital agencies are thriving where once only disused warehouses existed. The area's transformation is much to the credit of the Baltic Creative Community Interest Company and Elevator Studios.

The story does not end there. Other sectors within the city are booming too, as evidenced by the national Industrial Strategy launching at the city's science and innovation campus, Sci-Tech Daresbury.

WHAT'S NEW?

Last year saw notable successes emerge from the Baltic Triangle, such as vTime, a company born out of the ashes of big local studio Psygnosis.

In the city centre, a new cluster is forming around the commercial district, where high-profile businesses such as Mando sit alongside co-working space Launch22 and the new Santander Incubator. Meanwhile, in the North Docks, an active IoT and maker community is securing a firm foothold.

Other exciting developments include the Binary Festival, an annual two-day event in which digital tech businesses open their doors to the public.

WHAT'S NEXT?

Schools such as The Studio will strengthen Liverpool's thriving tech and digital industries. The sixth-form college educates young people for success in a digital world.

Meanwhile, the Government's commitment to a £556 million boost for the Northern Powerhouse can only mean positive progression for the digital tech sector, while the city exercises new powers through devolution.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£17.5sq/ft

AVERAGE HOUSE PRICE[2]
£144,212

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
28%

QUALITY OF LIFE
83%

DIGITAL GROWTH OPTIMISM
79%

TRANSPORT INFRASTRUCTURE
40%

CLEMENS WANGERIN
Managing Director
vTime

WHAT WE DO

We develop and publish vTime, the leading social VR app that connects people in a completely new and unique way. People use vTime to socialise, engage and communicate with each other in virtual reality.

WHY LIVERPOOL?

Being a creative technology business, it helps massively to be located in a place that has character, feels vibrant, is in a good location, and has a heart. It helps to give us our identity, and aids recruitment of talent. It also means we have a great place to relax after work.

CARL WONG
Co-Founder & CEO
LivingLens

WHAT WE DO

LivingLens captures and analyses video content via speech, actions and sentiment, translating human behaviour into insights. We make working with video efficient and scalable by breaking it down into a usable data asset that enables fast insights creation.

WHY LIVERPOOL?

We are located in the Baltic Triangle, which is now home to many digital tech and creative companies. This community is highly supportive and is committed to helping digital tech and creative businesses like us to succeed.

GROWTH CHALLENGES

57%
LIMITED HIGHLY SKILLED WORKERS

50%
LIMITED INVESTMENT OPPORTUNITIES

36%
LIMITED DIGITAL INFRASTRUCTURE

34%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

DIGITAL TECH ECONOMY JOBS
23,407

ADVERTISED DIGITAL SALARY
£45,011

ADVERTISED NON–DIGITAL SALARY
£32,994

DIGITAL BUSINESS CONCENTRATION
0.20 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£359 million

DIGITAL TECH STARTUP BIRTHS

194
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+29% INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+22% GROWTH 2011 – 2015

London

£2.2bn
Digital tech investment 2016

£56bn
Digital tech turnover 2015

300k+
Digital tech jobs 2015

60 mins
1 tech company is started in London every hour*

London is the digital tech capital of Europe

London's emergence as a world leader in digital tech has been phenomenal. Its reputation for digital tech innovation and excellence is unparalleled.

More than a third of Europe's tech unicorns ($1billion valued businesses) are based in the capital. In 2016, Blippar, the augmented reality company, joined the ranks, alongside Transferwise, Shazam, Rightmove, Funding Circle and many more.

London Tech Investment vs. Other EU Cities (2016)

£Billion

City	£Billion
London	2.2
Amsterdam	1.15
Paris	1.07
Copenhagen	0.84
Milan	0.76
Dublin	0.69
Berlin	0.6
Stockholm	0.25
Madrid	0.1

TECH NATION 2017

From **TECH CITY**

*8,472 businesses were born in 2015

WHAT'S THERE?

London is a world leader in digital tech, and its reputation is growing ever stronger.

In the City – arguably the global capital of finance - growing fintech businesses such as Transferwise, Algomi, iwoca and eToro are giving the big banks a run for their money.

In the East End, start-ups including Kano, SAM Labs and Roli are on the frontline of a maker movement while Plexal at Here East, part of the 2012 Olympic Games Park, has been transformed into a hub of digital tech activity, with 68,000 sq ft of co-working space.
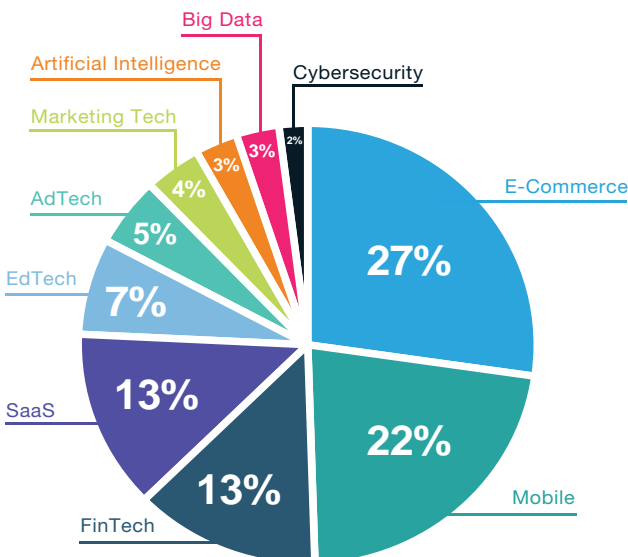
To the north, Abbey Road Studios - once the heart of the swinging sixties' music scene - now runs an 'Abbey Road Red' incubator programme for music tech entrepreneurs.

Meanwhile, the capital's giant e-commerce industry - boasting platforms such as Farfetch, Matchesfashion.com, Depop and Threads - has spread its roots as far as Richmond, where Notonthehighstreet.com has its leafy headquarters.

Co-working spaces can be found in all corners of the city, from Second Home just off Brick Lane to Interchange in Camden, via Bermondsey's Biscuit Factory and Tomorrow in Croydon's Tech City. There are now close to 200 co-working spaces in London.

London is home to four of the best universities in the world which are generating and attracting a rich pool of talent. They are the foundation of the city's rich knowledge base, known as the Knowledge Quarter. It includes institutes such as the Alan Turing Institute, as well as tech companies such as Google.

London's top digital sectors by % invested in digital tech (2016)

Pie chart — London's top digital sectors by % invested in digital tech (2016):
- E-Commerce 27%
- Mobile 22%
- FinTech 13%
- SaaS 13%
- EdTech 7%
- AdTech 5%
- Marketing Tech 4%
- Artificial Intelligence 3%
- Big Data 3%
- Cybersecurity 2%

JOSÉ NEVES
CEO & Founder
Farfetch

FARFETCH

WHAT WE DO

Farfetch is the online platform to shop the world's greatest selection of luxury. Founded in 2008 by José Neves, the platform partners with the world's best luxury retailers. This unique business model guarantees an unparalleled range of pieces to shop in one online destination. The ambition is to change the way the world shops for fashion.

WHY LONDON?

In London there is a vibrant ecosystem of both technical people and creative minds. The city is a magnet for international talent, and benefits from the diversity of its people. East London is now the city's tech centre – it's great to be surrounded by local startups doing interesting things.

TAMARA RAJAH
CEO & Founder
Live Better With
LiveBetterWith
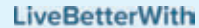
WHAT WE DO

We improve the day-to-day quality of life for people living with long-term illnesses by curating and developing non-medical products that can alleviate symptoms and side effects.

WHY LONDON?

London's density of companies at similar sizes, stages and ambitions is a big bonus: (i) we can constantly learn from those around us who are a few steps ahead with scaling, (ii) we can tap into the ecosystem that has developed because of this density, including financing, networks, infrastructure and talent

Accelerator programmes spanning all sectors can be found in the city. One shining example is Entrepreneur First, which supports London's emergence as a machine intelligence powerhouse.

WHAT'S NEW?

The AIM on the London Stock Exchange performed well in 2016, with 39 IPOs raising almost £1 billion. What's more, in 2016 alone London companies attracted £2.2 billion of VC and PE funding. Some of the largest rounds of funding were raised by Deliveroo, Citymapper and Darktrace.

In January 2016, the £50 million UCL Technology Fund was set up to invest in intellectual property from University College London while in the same month, the £40 million Apollo Therapeutics Fund was created in collaboration with the University of Cambridge, Imperial College London and UCL.

King's College London announced the first 20 startups to join its new accelerator programme, while food tech startups received a boost from the opening of Just Eat's new accelerator programme.

WHAT'S NEXT?

Google has announced plans to hire more than 3,000 staff in the UK, in what amounts to a major boost to the UK digital tech sector in the wake of Britain's vote to leave the EU.

The planned expansion of their King's Cross campus would leave it employing 7,000 in London by 2020, making it the biggest development outside the US.

Also expanding in the capital are Apple, Amazon and Snap, which has chosen London as its international HQ. Sadiq Khan, the Mayor of London, has launched a £7 million scheme to support young people, especially women and minority groups, into digital tech careers.

Finally, an important part of any city is its cultural offering. The Barbican Centre in Moorgate is working with other cultural organisations to form a Cultural Hub, a creative alliance which builds upon the City's already internationally acclaimed cultural offer.

NOTABLE UNIVERSITIES
IMPERIAL COLLEGE LONDON
UNIVERSITY COLLEGE LONDON
KING'S COLLEGE LONDON

NOTABLE INVESTORS
BALDERTON CAPITAL
INDEX VENTURES
ATOMICO

NOTABLE WORKSPACES
CENTRAL WORKING
SECOND HOME
RUNWAY EAST

NOTABLE INCUBATORS
MASSCHALLENGE
STARTUPBOOTCAMP
BETHNAL GREEN VENTURES

NOTABLE MEETUPS & NETWORKS
SILICON DRINKABOUT
SILICON MILKROUNDABOUT
INTERNET OF THINGS

NOTABLE ACCELERATORS
ENTREPRENEUR FIRST
TECHSTARS
SEEDCAMP

OFFICE RENT[1]
£87.5sq/ft

AVERAGE HOUSE PRICE[2]
£582,816

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
45%

QUALITY OF LIFE
59%

DIGITAL GROWTH OPTIMISM
78%

TRANSPORT INFRASTRUCTURE
57%

SARAH WOOD
Founder & CEO
Unruly

UNRULY

WHAT WE DO
Founded in 2006, Unruly is an ad tech company that gets videos seen, shared and loved across the open web. It is for brands that want to move people, not just reach people.

WHY LONDON?
Being situated in London, in the heart of Tech City, means we have access to the HQs of our customer base, some of the most innovative companies on the planet and world-leading universities and talent.

MARTIN STEAD
CEO
Nutmeg

nutmeg

WHAT WE DO
Nutmeg takes the best of high-end investing, strips out the complexity and cost, and provides it to customers online. Our fees are simple, and customers can manage their risk and withdraw money for free any time.

WHY LONDON?
Vauxhall gives us access to London's expertise, events, talent, partners and clients without the higher prices of central London. London has been perfect for us - for hiring, fundraising, targeting clients and more.

GROWTH CHALLENGES
58%
LACK OF SUPPLY OF HIGHLY SKILLED WORKERS

39%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

38%
RETENTION OF SKILLED WORKERS

31%
REGULATION (E.G. EMPLOYMENT LAW)

DIGITAL TECH ECONOMY JOBS
300,169

ADVERTISED DIGITAL SALARY
£61,803

ADVERTISED NON-DIGITAL SALARY
£44,289

DIGITAL BUSINESS CONCENTRATION
0.86 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£30 billion

HIGH-GROWTH DIGITAL BUSINESSES[4]
20%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH
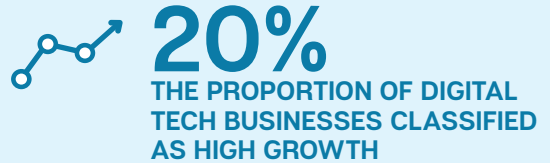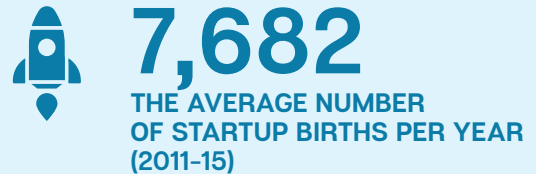
DIGITAL TECH STARTUP BIRTHS
7,682
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT
+42% INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER
+106% GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Manchester

NOTABLE UNIVERSITIES
UNIVERSITY OF MANCHESTER
MANCHESTER METROPOLITAN
UNIVERSITY
UNIVERSITY OF SALFORD

NOTABLE COMPANIES
BOOHOO
THE HUT GROUP

NOTABLE INVESTORS
GP BULLHOUND
BUSINESS GROWTH FUND
EVOLUTION FUNDING

NOTABLE ACCELERATORS
IGNITE
ENTREPRENEURIAL SPARK

NOTABLE WORKSPACES
THE SHARP PROJECT
SPACEPORTX
INNOSPACE MANCHESTER

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
Manchester – mad for music, football and now, digital tech too.

Three universities have attracted big names including LateRooms and Auto Trader to the city, while according to GP Bullhound 28% of the 50 fastest growing digital tech companies in the North are located in Manchester.

MediaCityUK, home to the BBC and ITV Granada, draws in yet more talent. Manchester Science Partnerships' Central Campus is home to more than 170 companies in the life science, healthtech, biotech, ICT, digital and creative sectors.

Elsewhere, The Sharp Project, SpacePortX and Innospace Manchester all provide space for digital tech entrepreneurs, while Rise Manchester hosts many local startups.

WHAT'S NEW?
Last year, Manchester made it into the top 20 in the European Digital City Index for starting and scaling a digital tech business.

Two new accelerators, Wayra and Ignite, were launched, while Manchester City Council awarded two £2 million grants for the creation of two new technology hubs.

WHAT'S NEXT?
Mi-IDEA, a new facility for tech startups and entrepreneurs is soon to open, while the £235 million Sir Henry Royce Institute for Advanced Materials Research and Innovation is expected to open in 2019.

In other news, £10 million in government funding is being channelled into the CityVerve project to test IoT technology.

OFFICE RENT[1]
£34sq/ft

AVERAGE HOUSE PRICE[2]
£186,154

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
27%

QUALITY OF LIFE
75%

DIGITAL GROWTH OPTIMISM
85%

TRANSPORT INFRASTRUCTURE
53%

PAUL HAYDOCK
CEO & Co-Founder
DueCourse

DueCourse

WHAT WE DO
DueCourse lets you grow your small business by getting paid early on your invoices. Simply sync up your cloud accounting software, choose your invoice and we'll send you the money the same day.

WHY MANCHESTER?
Competition in Manchester is low when compared with the saturated London market.This has helped us to establish ourselves as market leaders and attract the best talent early on.

DAVID LEVINE
CEO
DigitalBridge

DigitalBridge

WHAT WE DO
DigitalBridge uses computer vision and machine learning to enable consumers to virtually "try on" home décor products. It's a solution to the £1 billion "imagination gap" problem, when shoppers delay purchases because they can't imagine products in their own homes.

WHY MANCHESTER?
Manchester is one of the world's leading research centres for computer vision and machine learning with a great talent pool coming out of the universities. In addition, costs of living are on average 42% cheaper than those in London. Yet we can get to the capital in just two hours.

GROWTH CHALLENGES

69%
LIMITED HIGHLY SKILLED WORKERS

34%
RETENTION OF SKILLED WORKERS

28%
LIMITED INVESTMENT OPPORTUNITIES

26%
REGULATION (E.G. DATA PROTECTION, EMPLOYMENT LAW)

DIGITAL TECH ECONOMY JOBS
62,653

ADVERTISED DIGITAL SALARY
£47,349

ADVERTISED NON–DIGITAL SALARY
£33,497

DIGITAL BUSINESS CONCENTRATION
0.63 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£2.8 billion

HIGH–GROWTH DIGITAL BUSINESSES[4]
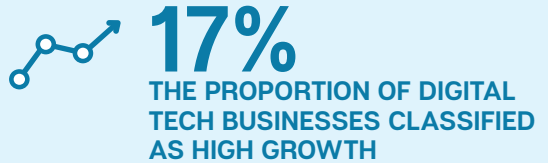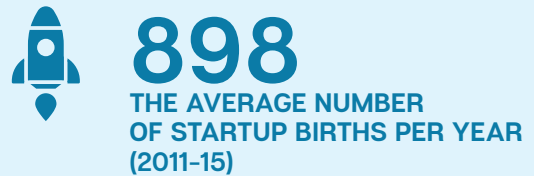
17%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

898
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+23%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+45%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Middlesbrough

NOTABLE UNIVERSITIES
TEESSIDE UNIVERSITY |

NOTABLE WORKSPACES
BOHO ZONE |
FUSION HIVE |
TEESSIDE UNIVERSITY LAUNCHPAD |

NOTABLE MEETUPS & FESTIVALS
ANIMEX FESTIVAL |
REFRESH TEESSIDE |
INNOVATE TEES VALLEY FESTIVAL |

WHAT'S THERE?

Built on steel, the Tees Valley is now a hotbed for digital tech innovation. It is home to countless success stories, including Visualsoft, Double11 and Big Bite. These companies are served by world-class facilities, including The Boho Zone which has seven buildings including one live-work space, and Stockton's Fusion Hive, which provides space for scale-ups.

Meanwhile DigitalCity, born out of Teesside University, has spent the past 13 years supporting the digital tech and creative industries.

In fact, the Teesside University has been critical to the cluster's success. Its specialist degrees, such as Computer Gaming and Animation, produce the talent that growing businesses need.

Middlesbrough's gaming sector is also thriving. The UK's largest festival of animation and computer games, Animex, is hosted here. Founded in 2000, Animex takes place annually and attracts big names like Pixar and Dreamworks.

WHAT'S NEW?

A collaboration between Google's Digital Garage, The Chartered Institute of Public Relations and Teesside University recently resulted in the Showcase Digital Conference in Teesside. Meanwhile, the new Innovate Tees Valley Festival is becoming a regular fixture, connecting businesses with the networks they need to innovate and grow.

WHAT'S NEXT?

The Launchpad on the Teesside University campus will continue to shape Middlesbrough's success by supporting ambitious startups in and around the campus. They have recently announced a new startup programme, Launchpad FUEL, providing graduate entrepreneurs with grants of up to £10,000.

TECH NATION 2017

From **TECH CITY**

AVERAGE HOUSE PRICE[1]
£111,004

[1]Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
38%

QUALITY OF LIFE
58%

DIGITAL GROWTH OPTIMISM
79%

TRANSPORT INFRASTRUCTURE
27%

IAIN MCPHERSON
Co-Founder
Big Bite

bigbite

WHAT WE DO
Big Bite is a digital studio for technology-led enterprises. Our global recognition has led the team to become one of 12 WordPress.com VIP partners worldwide.

WHY MIDDLESBROUGH?
We are able to serve a global client base from our office in Boho One, the heart of the digital tech community in Middlesbrough. We also help to organise Refresh Teesside, an event bringing together the creative community in Teesside.

DEAN BENSON
Managing Director
Visualsoft

VISUALSOFT ™

WHAT WE DO
Visualsoft helps retailers to build, grow and shape their businesses online, through an integrated offering of online marketing, e-commerce solutions and dedicated support. We have grown in tandem with the industry and now occupy impressive office spaces in Newcastle, London and Manchester.

WHY MIDDLESBROUGH?
Basing ourselves in the North East has given us access to an incredible pool of talent and allowed us to build a strong team of digital tech, online marketing, sales and business experts.

DIGITAL TECH ECONOMY JOBS
6,970

ADVERTISED DIGITAL SALARY
£34,956

ADVERTISED NON-DIGITAL SALARY
£29,917

DIGITAL BUSINESS CONCENTRATION
0.31 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[2]
£211 million

DIGITAL TECH STARTUP BIRTHS

65
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+14%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

GROWTH CHALLENGES
57%
LIMITED HIGHLY SKILLED WORKERS

48%
LIMITED DIGITAL INFRASTRUCTURE

45%
LIMITED INVESTMENT OPPORTUNITIES

41%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

[2]Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Newcastle

NOTABLE UNIVERSITIES
NEWCASTLE UNIVERSITY
NORTHUMBRIA UNIVERSITY

NOTABLE WORKSPACES
CAMPUS NORTH
THE CORE
HOULTS YARD

NOTABLE MEETUPS & NETWORKS
DYNAMO NORTH EAST
DIGITAL LEADERS
DIGITAL UNION

NOTABLE INVESTORS
IP GROUP
NORTHSTAR VENTURES
RIVERS CAPITAL

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
No surprises in Newcastle – this North East cluster continues on a steady upward trajectory.

The presence of some of the UK's biggest digital tech businesses, such as Sage, has long attracted innovative startups to the area.

These are stimulated by support networks such as Dynamo North East and Digital Union, by co-working spaces such as Campus North and Hoults Yard, and by access to finance from local investors, including Northstar Ventures, which has more than £100 million under management.

WHAT'S NEW?
Newcastle is producing companies with significant staying power. Last year, True Potential became the only UK fintech firm to make it into the Deloitte Technology Fast 50 three years in a row, while Performance Horizon raised $15.4 million in Series C funding.

Newcastle and Northumbria Universities continue to support and strengthen the cluster. They have long acted as a strong talent pool for regional players, such as French gaming giant Ubisoft.

Newcastle's Science Central, a joint venture between the University and the City Council, is a £350 million investment intended to house a series of National Innovation Centres. Northumbria University champions the region's 'connected construction' cluster through its world-leading BIM Academy.

Out in the wider ecosystem, the Newcastle-born Ignite accelerator expanded into London, while Newcastle Startup Week launches in May to boost startups in the community.

WHAT'S NEXT?
All eyes are now on the North East Futures UTC set to open in September 2018. NewcastleGateshead is also host to the Great Exhibition of the North in 2018. The exhibition will focus on industrial heritage and the current innovation boom.

OFFICE RENT[1]
£24sq/ft

AVERAGE HOUSE PRICE[2]
£153,179

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
22%

QUALITY OF LIFE
90%

DIGITAL GROWTH OPTIMISM
76%

TRANSPORT INFRASTRUCTURE
48%

ALAN LAING
Managing Director
Northern Europe
Sage

sage

WHAT WE DO
Sage is the market leader for integrated accounting, payroll and payment systems. It is the largest UK-owned tech company in the FTSE100 with more than 13,000 people in 23 countries serving an extensive network of business people, partners and accountants.

WHY NEWCASTLE?
The region's commitment to STEM through its schools, apprenticeships, colleges and universities is strong. Combined with the unusually high level of collaboration that we enjoy with local businesses, this results in a lasting cultural legacy encouraging and nurturing creative digital talent. This is a thriving community, which creates a highly valuable digital tech talent pool and strongly contributes to the nation's digital tech sector.

GILBERT CORRALES
Co-founder & CEO
Leaf

leaf

WHAT WE DO
Leaf is a music discovery and fan engagement platform. We have 2 million users across 195 countries and our goal is to provide the best digital experience at the points where fans and artists connect.

WHY NEWCASTLE?
The tech ecosystem in the North East has been extremely helpful to Leaf. From the Ignite accelerator through to landlords, local councils and access to finance, we've been supported at every level.

GROWTH CHALLENGES
66%
LIMITED HIGHLY SKILLED WORKERS
37%
LIMITED INVESTMENT OPPORTUNITIES
36%
POOR TRANSPORT INFRASTRUCTURE
33%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

DIGITAL TECH ECONOMY JOBS
20,290

ADVERTISED DIGITAL SALARY
£51,213

ADVERTISED NON-DIGITAL SALARY
£33,650

DIGITAL BUSINESS CONCENTRATION
0.69 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£1 billion

HIGH-GROWTH DIGITAL BUSINESSES[4]
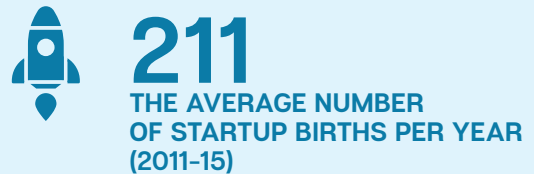
21.7%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

211
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011-15)

DIGITAL BUSINESS COUNT

+34%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+40%
GROWTH 2011 – 2015
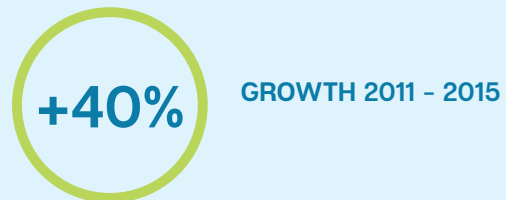
[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Norwich

NOTABLE UNIVERSITIES
UNIVERSITY OF EAST ANGLIA |
NORWICH UNIVERSITY |
OF THE ARTS

NOTABLE WORKSPACES
ST GEORGE'S WORKS |
IDEAS FACTORY |
WHITESPACE |

NOTABLE MEETUPS & NETWORKS
HOT SOURCE |
NORFOLK DEVELOPERS |
SYNCDEVELOPHER |

NOTABLE COMPANIES
AVIVA |
AXON VIBE |
PROXAMA |

TECH NATION 2017
From **TECH CITY**

WHAT'S THERE?

This historic textiles centre now has a fast-growing digital tech economy. Two leading universities and a steady supply of graduates have attracted and created digital tech businesses such as Rainbird AI, Validus-IVC and Epos Now.

Startups are nurtured by Meetup groups including SyncNorwich and Hot Source, as well as local events such as the #SyncTheCity startup weekend. There is a strong trend of founders 'giving back' to the community. The Norfolk Developers Meetup group, for example, was set up by the founder of Naked Element.

WHAT'S NEW?

2016 saw the launch of a number of events, including the DigitalCity trail and MyTech, which are aimed at inspiring young people and were able to bring businesses and students together to network. Meanwhile, the Norfolk Developers' Conference included a 'schools day' to promote digital tech skills.

Barclays opened an Eagle Lab, while Norwich University of the Arts launched its new incubation hub the Ideas Factory, and TechEast opened its embassy in London. The annual Norwich Gaming Festival continues to attract enthusiastic crowds, with more than 30,000 visitors in 2016.

WHAT'S NEXT?

A proposed Tech Corridor along the A11 linking Norwich and Cambridge could bring thousands of jobs and more than £500 million in investment. The New Anglia LEP has established Enterprise Zones across the region to nurture growth, while plans for redevelopment in the Shoe Quarter are under way to create a live/work community.

What's more, the £81 million Quadram Institute is due to open in 2018 at the Norwich Research Park. The institute will be at the forefront of research into food and health.

OFFICE RENT[1]
£17sq/ft

AVERAGE HOUSE PRICE[2]
£223,337

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
35%

QUALITY OF LIFE
97%

DIGITAL GROWTH OPTIMISM
81%

TRANSPORT INFRASTRUCTURE
22%

DR NEIL GARNER
Founder & CEO
Thyngs

WHAT WE DO
Thyngs enables anyone to make any everyday object easily interactive through a smartphone. We started with the charity sector, upgrading charity tins, ID badges and event stands to enable quick and easy digital donations and gift aid collection.

WHY NORWICH?
Norwich offers great connections with Cambridge and London, plus access to talent from local universities. Being based in the WhiteSpace/Barclays Eagle Lab tech hub helps us to engage with the local community and provides on-site access to 3D printers and Makerspace.

DEAN WITHEY
CEO & Founder
ubisend

WHAT WE DO
ubisend is a technology company that creates AI-driven chatbots to help brands to communicate with their audience on a personal level, at scale. Our job is to give brands a digital voice.

WHY NORWICH?
Norwich is becoming a thriving digital tech hub. We have built connections with local organisations, including the universities and other businesses, to find talent and grow support for ubisend.

GROWTH CHALLENGES

53%
LIMITED HIGHLY SKILLED WORKERS

48%
POOR TRANSPORT INFRASTRUCTURE

42%
LIMITED DIGITAL INFRASTRUCTURE

27%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

DIGITAL TECH ECONOMY JOBS
7,589

ADVERTISED DIGITAL SALARY
£40,101

ADVERTISED NON–DIGITAL SALARY
£30,904

DIGITAL BUSINESS CONCENTRATION
0.34 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£165 million

DIGITAL TECH STARTUP BIRTHS

111
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+18%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+27%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Nottingham

NOTABLE UNIVERSITIES
UNIVERSITY OF NOTTINGHAM
NOTTINGHAM TRENT UNIVERSITY

NOTABLE WORKSPACES
ACCELERATE PLACES
UNIVERSITY OF NOTTINGHAM
INNOVATION PARK
MINOR OAK

NOTABLE INVESTORS
BLENHEIM CHALCOT
FORESIGHT

NOTABLE MEETUPS & NETWORKS
NOTT TUESDAY
TECH NOTTINGHAM
WOMEN IN TECH

NOTABLE COMPANIES
BOOTS UK
PENDRAGON
EXPERIAN

TECH NATION 2017

From **TECH CITY UK**

WHAT'S THERE?

Nottingham is one of the youngest cities in the UK. More than half of its residents are under 30, many are attracted to the city by its affordable quality of life. Factor in two local universities, and you have a rich talent pool of, and for, ambitious young people.

It is one of the UK's six Science Cities, thanks to its innovative research and businesses in the field, and it is increasingly popular with healthtech startups too.

Large companies like Capital One, Experian, TDX Group, Boots and MHR are based here and continue to grow. In the Creative Quarter digital tech startups and creative businesses are sharing knowledge and opportunities, while co-working spaces can be found at Antenna, Minor Oak and the University of Nottingham Innovation Park.

WHAT'S NEW?

A £2 million data centre has been opened by Space Data Centres Ltd, providing a dedicated space for companies to store their IT infrastructure.

Blenheim Chalcot has opened a new hub for digital tech businesses in the city centre – Accelerate Places. Demand for space is so high that expansion into a neighbouring building has been announced. The fund also co-sponsored Tech Nottingham's Hack24 event for coders.

WHAT'S NEXT?

A campaign to raise the profile of Nottingham in the capital is currently under way. The Nottingham > London programme led by Marketing Nottingham and Nottinghamshire (MNN) aims to generate investment and attract talent.

Tech Nottingham is working hard to build a bustling community, improve student retention and remove barriers to the sector.

OFFICE RENT[1]
£19.5sq/ft

AVERAGE HOUSE PRICE[2]
£136,246

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
36%

QUALITY OF LIFE
89%

DIGITAL GROWTH OPTIMISM
81%

TRANSPORT INFRASTRUCTURE
64%

ADAM BIRD
Founder & CEO
Cronofy

CRONOFY

WHAT WE DO

Cronofy offers a fully supported SaaS Calendar API that enables enterprise application providers to build real-time, two-way calendar integrations without compromising users' privacy.

WHY NOTTINGHAM?

Nottingham provides us with the best of both worlds. Local talent and an enviably vibrant digital tech scene is complemented by easy access to London's world-class digital tech community.

ANDREW BULLOCK
Founder & CTO
Unidays

UNiDAYS

WHAT WE DO

UNiDAYS is the world's leading Student Affinity Network, connecting a verified global student audience with relevant brands and services across every consumer touchpoint and creating lifetime loyalties.

WHY NOTTINGHAM?

Nottingham is a vibrant and creative city with a rich talent pool and strong cultural identity. UNiDAYS loves being part of the booming digital tech scene here and we're proud to call it home.

GROWTH CHALLENGES

59%
LIMITED HIGHLY SKILLED WORKERS

30%
REGULATION (E.G. EMPLOYMENT LAW)

25%
RETENTION OF SKILLED WORKERS

18%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

DIGITAL TECH ECONOMY JOBS
19,741

ADVERTISED DIGITAL SALARY
£44,032

ADVERTISED NON-DIGITAL SALARY
£33,062

DIGITAL BUSINESS CONCENTRATION
0.77 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£835 million

HIGH-GROWTH DIGITAL BUSINESSES[4]
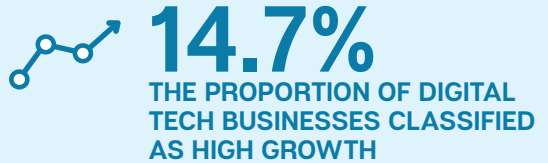
14.7%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

241
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+31%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+35%
GROWTH 2011 – 2015
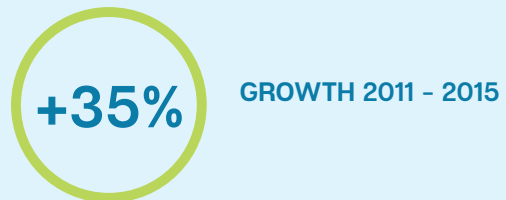
[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Oxford

NOTABLE UNIVERSITIES
UNIVERSITY OF OXFORD
OXFORD BROOKES UNIVERSITY

NOTABLE COMPANIES
OXFORD NANOPORE TECHNOLOGIES
SOPHOS
NATURALMOTION

NOTABLE INVESTORS
OXFORD SCIENCES INNOVATION
OXFORD CAPITAL
OXFORD TECHNOLOGY MANAGEMENT

NOTABLE MEETUPS & NETWORKS
OXFORD DIGITAL
OXFORD ENTREPRENEURS
OXFEST

NOTABLE WORKSPACES
THE OXFORD FOUNDRY
THE OXFORD LAUNCHPAD
OXFORD INNOVATION

WHAT'S THERE?

Onwards and upwards for Oxford, a city that is home to some of the UK's leading digital tech companies and a world-class University. Success stories include cyber security company Sophos, which achieved the largest IPO for a UK software company in 2015, as well as gaming giants Rebellion and NaturalMotion.

WHAT'S NEW?

2016 was a good year for Oxford. Oxford Sciences Innovation (OSI), the investment vehicle for the university's spinouts, grew to £580 million after Asian investors joined its fund.

The commercial arm of the University, Oxford University Innovation, reached new heights too, launching an unprecedented 24 high-tech firms and raising a total of £52.6 million in seed stage funding. Twenty-one of these were spinouts from the university, including OxStem, Mind Foundry and EnzBond.

Not all the businesses making waves are linked to the university; Solid State Logic, OmPrompt and digital agency White October are all thriving.

Meanwhile Digital Oxford, which launched in 2015, continued to represent and promote the digital tech sector across Oxfordshire, including Didcot's Harwell Science & Innovation Campus, which is home to 200 organisations and companies, employing more than 5,000 people.

WHAT'S NEXT?

Watch out for the Fab Accelerator, which ran its pilot in 2016 and The Oxford Foundry – a scaled up entrepreneurial hub for students, due to open this summer.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£25sq/ft

AVERAGE HOUSE PRICE[2]
£521,732

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
54%

QUALITY OF LIFE
85%

DIGITAL GROWTH OPTIMISM
78%

TRANSPORT INFRASTRUCTURE
23%

LAUREN FLETCHER
CEO & Founder
BioCarbon Engineering

WHAT WE DO
BioCarbon Engineering is building automated drones which can plant at least 1 billion trees a year in order to rebuild global ecosystems, fight climate change and provide social uplift to millions of families around the world.

WHY OXFORD?
Our Oxford location has given us access to a diverse talent pool, research labs, greenhouses and outdoor trial sites. It also offers easy access to London and the rest of the world.

DR GRAEME SMITH
CEO
Oxbotica
OXBOTICA

WHAT WE DO
Oxbotica is an award-winning vehicle software company that is challenging Silicon Valley digital tech giants. Our autonomous operating system, Selenium, is vehicle agnostic, and learns from the driver over time.

WHY OXFORD?
Our team still includes many of the original inventors of our software, who are themselves Oxford University robotics graduates. It's fantastic to have a global, world-leading talent pool right on our doorstep.

GROWTH CHALLENGES

43%
LIMITED HIGHLY SKILLED WORKERS

35%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

32%
POOR TRANSPORT INFRASTRUCTURE

32%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
26,367

ADVERTISED DIGITAL SALARY
£47,795

ADVERTISED NON–DIGITAL SALARY
£33,384

DIGITAL BUSINESS CONCENTRATION
1.53 (high)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£1.1 billion

HIGH–GROWTH DIGITAL BUSINESSES[4]

18.2%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS*

232
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

17%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+43%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Plymouth

NOTABLE UNIVERSITIES
PLYMOUTH UNIVERSITY
THE UNIVERSITY OF
ST MARK & ST JOHN

NOTABLE WORKSPACES
MILLFIELDS TRUST
THINQTANQ
FORMATION ZONE

NOTABLE MEETUPS & NETWORKS
DIGITAL PLYMOUTH CONFERENCE
PLYMOUTH JS
EXPLORE MESH

NOTABLE COMPANIES
SPONGE UK
GOSS INTERACTIVE
REAL IDEAS ORGANISATION

WHAT'S THERE?

"Britain's ocean city" is not just picturesque, it is making waves with an early stage cluster of science and digital tech businesses too.

The Plymouth Science Park is among the largest in the South West, home to more than 120 businesses, including a number of spinouts from Plymouth University. Thrive Hubs operate two spaces in Plymouth and THINQTANQ offers hot desking, events and a small prototyping lab in the city centre.

Plymouth University's Formation Zone incubator and its Futures Entrepreneurship Centre foster innovation. The digital tech community is also supported by initiatives such as MESH, (Make Engineer Socialise Hack), and Global Game Jam. What's more, many of the new digital tech businesses in the city are formed as CICs, reflecting Plymouth's history of support for social enterprise.

WHAT'S NEW?

Founded in 2015 as a quarterly Meetup for the digital tech community, last year Digital Plymouth expanded into a one-day conference.

Plymouth County Council has been holding DataPlay events. One of these, developed in collaboration with the Real Ideas Organisation, was dedicated to young people and resulted in a programme that suggests how safe each neighbourhood is.

WHAT'S NEXT?

This year Plymouth Science Park are opening a new £7 million IT hub, providing flexible office space for up to 200 people.

Plymouth University's i-DAT, (Institute of Digital Art and Technology), is an open research lab that has recently moved to new premises. The new lab will host the Quorum research initiative. Meanwhile, the STEM Centre at City College Plymouth has received significant investment.

TECH NATION 2017

From **TECH CITY**

OFFICE RENT[1]
£15sq/ft

AVERAGE HOUSE PRICE[2]
£185,881

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
49%

QUALITY OF LIFE
83%

DIGITAL GROWTH OPTIMISM
84%

TRANSPORT INFRASTRUCTURE
25%

LOUISE PASTERFIELD
Managing Director
Sponge UK

spongeuk

WHAT WE DO

Sponge UK is an award-winning digital learning company based at Plymouth Science Park. We work closely with world-leading organisations to deliver better workplace performance using advanced learning technologies.

WHY PLYMOUTH?

With the sea and the moors within easy reach, the quality of life for employees is excellent. We're seeing more talented graduates looking to stay in the area as the city's digital tech sector thrives.

PAUL WRIGHT
CEO & Founder
iotec

iotec

WHAT WE DO

iotec are intent marketing specialists, applying machine learning to identify consumer intent without assumptions. We provide transparent media buying, intelligent insights and expertise to enable brands to understand and intelligently act in real context and in real time.

WHY PLYMOUTH?

Plymouth has an increasingly forward-looking and supportive approach to startups in the digital tech space. We've just moved into the new state-of-the-art building in Plymouth Science Park - One Research Way. We're in great company, with dozens of innovative startups and plenty of space for us to grow.

GROWTH CHALLENGES

58%
POOR TRANSPORT INFRASTRUCTURE

48%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

45%
LIMITED INVESTMENT OPPORTUNITIES

43%
LIMITED HIGHLY SKILLED WORKERS

DIGITAL TECH ECONOMY JOBS
6,404

ADVERTISED DIGITAL SALARY
£42,275

ADVERTISED NON–DIGITAL SALARY
£31,580

DIGITAL BUSINESS CONCENTRATION
0.35 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£82 million

DIGITAL TECH STARTUP BIRTHS

54
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+28%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 - 15

DIGITAL BUSINESS TURNOVER

+9%
GROWTH 2011 - 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Reading

NOTABLE UNIVERSITIES
UNIVERSITY OF READING

NOTABLE COMPANIES
WESTCOAST
ULTIMA BUSINESS SOLUTIONS
PULSANT

NOTABLE FESTIVALS
FESTIVAL OF DIGITAL DISRUPTION
THAMES VALLEY TECH WEEK

NOTABLE WORKSPACES
GROW@GREENPARK
WORK.LIFE (APRIL 2017)

NOTABLE MEETUPS & NETWORKS
INTERNET OF THINGS
THAMES VALLEY
GLUG READING

NOTABLE INVESTORS
FINANCE SOUTH EAST
HENLEY BUSINESS ANGELS

TECH NATION 2017
From **TECH CITY**

WHAT'S THERE?
Major digital tech multinationals including Microsoft, Oracle and Cisco Systems have long understood the benefits of Reading.

Close to, yet cheaper than London, and within easy reach of Heathrow airport, the town continues to attract companies from far afield. US company Datto, for example, has its EMEA HQ in Reading.

Many multinationals are based at Green Park, a successful business park which helps to drive activity in the cluster. The Thames Valley Science Park is also home to 70 companies ranging from early stage startups to global R&D centres.

Fostering growth in the cluster is GROW@GreenPark. The co-working space has more than 300 members, including Black Swan and Blue Array.

New talent is on tap from the University of Reading, which also runs the successful Enterprise Centre at the Thames Valley Science Park.

WHAT'S NEW?
ConnectTVT goes from strength to strength. Last year, the platform for connecting the Thames Valley digital tech community launched its 50 Game Changers initiative, designed to celebrate the cluster's unsung heroes.

Reading's digital tech companies are attracting investment too. Last year, cyber security company SafeToNet landed £3 million in capital.

WHAT'S NEXT?
Cloud HR provider Fairsail is due to move to Thames Valley Science Park's new site in autumn 2017, after being ranked among the UK's fastest growing digital tech companies for the third consecutive year.

With a number of rail improvements in the pipeline too, could Reading's digital tech economy be electrified along with its connections?

OFFICE RENT[1]
£36sq/ft

AVERAGE HOUSE PRICE[2]
£390,592

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
42%

QUALITY OF LIFE
74%

DIGITAL GROWTH OPTIMISM
77%

TRANSPORT INFRASTRUCTURE
43%

RICHARD PURSEY
CEO & Founder
SafeToNet Ltd

SafeToNet

WHAT WE DO
SafeToNet uses artificial intelligence and cognitive analytics to detect and block antisocial content on the web, and protect the vulnerable against cyber abuse in real time.

WHY READING?
Our Reading location has helped us to develop crucial partnerships with the likes of Reading University, Cisco & EY. Thanks to the high-speed rail network, we have access to all corners of the country while avoiding London's high rent prices, freeing up more money for development.

RICHARD PARKER
CEO & Founder
Altitude Angel

ALTITUDE A·N·G·E·L

WHAT WE DO
Altitude Angel's platform delivers situation intelligence data to commercial drones – helping them to understand where they can fly, and who else is using the airspace. Our systems act as the foundation for the emerging global drone industry, providing the essential data and services required for it to flourish.

WHY READING?
We're based in the town centre and it's an ideal location. Reading is extremely well-connected to the rest of the country, and visitors from London are about half an hour away from our headquarters. There's an emerging digital tech startup scene in Reading, and we're pleased to be a key part of it!

GROWTH CHALLENGES

47%
LIMITED HIGHLY SKILLED WORKERS

32%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

22%
LIMITED INVESTMENT OPPORTUNITIES

19%
POOR TRANSPORT INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
45,269

ADVERTISED DIGITAL SALARY
£53,255

ADVERTISED NON–DIGITAL SALARY
£37,845

DIGITAL BUSINESS CONCENTRATION
7.26 (very high)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£5.5 billion

HIGH–GROWTH DIGITAL BUSINESSES[4]
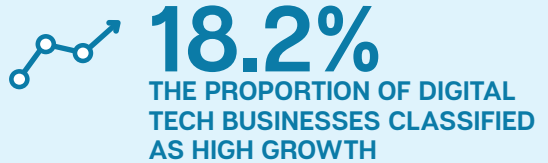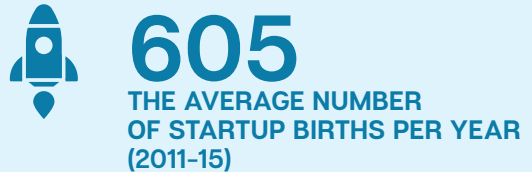
18.2%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

605
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+21%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+57%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Sheffield

NOTABLE UNIVERSITIES
UNIVERSITY OF SHEFFIELD
SHEFFIELD HALLAM UNIVERSITY

NOTABLE COMPANIES
WANDISCO
THE FLOOW
PLUSNET

NOTABLE WORKSPACES
UNION ST
ROCO
ELECTRIC WORKS

NOTABLE MEETUPS & NETWORKS
SHEFFIELD DIGITAL
STARTUP WEEKEND SHEFFIELD
SHEFFIELD CREATIVE GUILD

TECH NATION 2017
From TECH CITY

WHAT'S THERE?
Digital tech companies are not just born in Sheffield, they bloom here too. Plusnet was acquired by BT in 2007 and more recently, WANdisco floated on AIM in 2012 and now has a substantial presence in Silicon Valley.

Today the Floow employ more than 70 people in the city, while technology developed on the Advanced Manufacturing Park is being used in the next generation of aircraft.

This growth is well supported by organisations such as Sheffield Digital and workspaces such as Electric Works.

WHAT'S NEW?
The city's second University Technical College opened in September, while 2016 was also officially a 'Year of Making' in Sheffield, paying homage to Sheffield's heritage and reputation as a place where people create, make and develop products.

Access Space opened a new, inclusive makerspace in the city centre last year, and Campus Capital was launched from the University of Sheffield. The fund invests in early-stage digital tech companies, be it university spinouts or local startups.

WHAT'S NEXT?
All eyes are on the construction of the University of Sheffield's new Advanced Manufacturing Campus on the Advanced Manufacturing Park. What's more, Factory 2050 is now up and running. The factory – labelled the Factory of the Future – is the UK's first totally reconfigurable, digital factory for collaborative research.

Sichuan Guodong Construction will invest £220 million in Sheffield over the next three years. What's more, the city's first dedicated 'digital incubator' is due to open, after Sheffield won £3.5 million from central government.

OFFICE RENT[1] £21sq/ft

AVERAGE HOUSE PRICE[2] £148,207

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD
TALENT SUPPLY 27%
QUALITY OF LIFE 82%
DIGITAL GROWTH OPTIMISM 70%
TRANSPORT INFRASTRUCTURE 33%

CARL CAVERS
CEO & Co-founder
Sumo Digital

SUMO DIGITAL

WHAT WE DO
Sumo Digital is a world-class, award-winning, independent game development studio headquartered in Sheffield. Formed in 2003, Sumo now employs more than 350 people across studios in Sheffield, Nottingham and Pune (India).

WHY SHEFFIELD?
Sumo is proud of its northern heritage. The Sheffield HQ has strong roots in the area stretching back over 30 years.

PAUL BEECH
Director
Pimoroni

PIMORONI

WHAT WE DO
Pimoroni make and sell tech treasure for tinkerers. If you want to learn about electronics, we want to help you start. As well as selling our own products, we also sell the best tools from the maker community.

WHY SHEFFIELD?
Sheffield has the right mix of big city ideas and small town feel - we love it here. There is a lack of friction to setting up a business. That, plus its 'making' heritage and DIY culture mean it's the perfect place for Pimoroni to be.

GROWTH CHALLENGES
51%
LIMITED HIGHLY SKILLED WORKERS

44%
POOR TRANSPORT INFRASTRUCTURE

35%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

33%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
18,961

ADVERTISED DIGITAL SALARY
£46,278

ADVERTISED NON-DIGITAL SALARY
£31,533

DIGITAL BUSINESS CONCENTRATION
0.19 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)*
£339 million

HIGH-GROWTH DIGITAL BUSINESSES
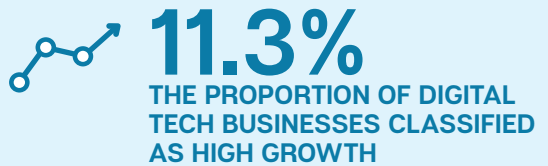
11.3%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS*

173
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+27%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+38%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Southampton

NOTABLE UNIVERSITIES
UNIVERSITY OF SOUTHAMPTON ❘
SOUTHAMPTON SOLENT UNIVERSITY ❘

NOTABLE COMPANIES
ORDNANCE SURVEY ❘
JP MORGAN ❘
SKANDIA ❘

NOTABLE WORKSPACES
VENTURE COWORKING ❘

NOTABLE MEETUPS
SOUTHAMPTON CREATIVES ❘

NOTABLE ACCELERATORS & INCUBATORS
SETSQUARED PARTNERSHIP ❘
FUTURE WORLDS ❘
CATALYST ❘

NOTABLE INVESTORS
Z21 INNOVATION FUND ❘
ANGELS 5K ❘

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
(Sometimes) sunny Southampton attracts both tourists and startups.

The cluster is supported by two universities – the University of Southampton and Southampton Solent.

The University of Southampton has 100 companies on campus,and has produced 27 spinouts since 2000. The university supports these businesses through the Future Worlds incubator, the Catalyst programme and the Science Park.

The university is also one of the founding members of the SETsquared partnership, and in 2013 launched the Web Science Institute. The institute brings together world-leading experts to tackle the biggest challenges facing the World Wide Web and society.

The city also has excellent international connections – a 2015 FedEx report singled out Southampton as an "export epicentre" with one of the highest export rates of any city: 81 per cent of small businesses in the area trade overseas.

WHAT'S NEW?
The pilot phase of 'Z21 Innovation Fund' has has been launched by the Solent LEP and the University of Southampton. Aiming to find and fuel research with real world applications, it will be a useful addition to the local angel network in the area, Angels 5K, which has 60 active investors.

In March, the region's innovators, entrepreneurs and investors came together at Venturefest South to showcase the latest technology and explore new ideas.

WHAT'S NEXT?
The decommissioned Fawley Power Station will be given a boost, with plans in motion to transform it into a technology, business and residential hub.

OFFICE RENT[1]
£21.5sq/ft

AVERAGE HOUSE PRICE[2]
£242,224

¹ JLL Property Data 2016
² Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
44%

QUALITY OF LIFE
61%

DIGITAL GROWTH OPTIMISM
48%

TRANSPORT INFRASTRUCTURE
30%

TOM BARNETT
Co-founder
Switch Concepts

switch

WHAT WE DO

Switch is an innovator in digital advertising technology. It automates the placing of advertisements in digital magazines, streamlining the process. But, unlike many companies in this field, Switch's toolkit facilitates a truly 'parallel' auction system that allows advertisers to bid for the best positions, while enabling publishers to maximise their advertising revenues. Essentially, Switch is set to revolutionise digital publishing, and this success has been driven by local Southampton talent.

WHY SOUTHAMPTON?

The resources and talent available in Southampton for technology startups are simply outstanding. I've lived in the city for most of my life, but feared that on launching Switch Concepts I might have to relocate to London. I couldn't have been more wrong. What's more, Switch has forged an invaluable relationship with Southampton University, a hotbed of digital tech skills and insight, that has proved useful in building our crack tech team. Quite simply, I can't imagine launching a digital tech business anywhere else.

GROWTH CHALLENGES
57%
LIMITED INVESTMENT OPPORTUNITIES
35%
LIMITED HIGHLY SKILLED WORKERS
35%
POOR TRANSPORT INFRASTRUCTURE
29%
LIMITED DIGITAL INFRASTRUCTURE

DIGITAL TECH ECONOMY JOBS
22,737

ADVERTISED DIGITAL SALARY
£45,633

ADVERTISED NON–DIGITAL SALARY
£33,230

DIGITAL BUSINESS CONCENTRATION
1.57 (high)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£1.1 billion

HIGH–GROWTH DIGITAL BUSINESSES[4]

10.4%
THE PROPORTION OF DIGITAL TECH BUSINESSES CLASSIFIED AS HIGH GROWTH

DIGITAL TECH STARTUP BIRTHS

270
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+18% INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+33% GROWTH 2011 – 2015
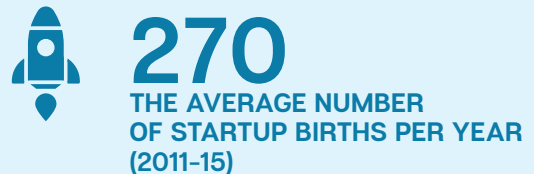
[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.
[4] Source BSD, 2015. Refers to businesses with 10 or more employees that are in the top 10% of all companies in terms of growth.

Sunderland

NOTABLE UNIVERSITIES
UNIVERSITY OF SUNDERLAND

NOTABLE COMPANIES
NISSAN
VANTEC
EPIC GAMES

NOTABLE ACCELERATORS
UNIVERSITY OF SUNDERLAND
ACCELERATOR FUND
GLUE ACCELERATOR +

NOTABLE WORKSPACES
SUNDERLAND SOFTWARE CENTRE
DIGITAL CATAPULT CENTRE
NORTH EAST & TEES VALLEY
UNIVERSITY OF
SUNDERLAND HATCHERY

NOTABLE MEETUPS & NETWORKS
SUNDERLAND DIGITAL
DRUPAL NORTH EAST

TECH NATION 2017
From **TECH CITY**

WHAT'S THERE?
With a proud history in shipbuilding and coal mining behind it, Sunderland is now looking forwards, towards a digital tech future.

The city's software scene has its roots in the creation of Domain Names in 1996, which has since led to the creation of many successful businesses in the area including Communicator Corp, SaleCycle, WorkCast and Footy.com.

Much of the area's growth over the past five years, however, stems from the establishment of Sunderland Software City in 2009. Meanwhile, the Digital Catapult Centre North East & Tees Valley has gained a reputation for the appliance of data-driven technologies.

WHAT'S NEW?
As a lead node of the Cisco National Virtual Incubator network, Sunderland Software City is building on its reputation for technical problem-solving. It has a renewed focus on bringing commercial opportunities from international enterprise organisations to the SME marketplace.

Sunderland Software Centre continues to build its reputation as a venue for major events, hosting the launch of Edtech North, the Tech Talent careers event and the Duke of York's Pitch@Palace initiative.

Sunderland College launched a suite of technical apprenticeships while The University of Sunderland's Higher and Degree Apprenticeships and Enterprise Place are encouraging entrepreneurship.

WHAT'S NEXT?
The International Advanced Manufacturing Park will provide a world-class environment for high tech industries and advanced manufacturing businesses. Digital Catapult NETV will drive initiatives that support manufacturing companies to explore and implement new technologies, establishing IAMP as an international hub of digitally-enabled manufacturing.

OFFICE RENT[1]
£22sq/ft

AVERAGE HOUSE PRICE[2]
£117,174

[1] JLL Property Data 2016
[2] Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
22%

QUALITY OF LIFE
63%

DIGITAL GROWTH OPTIMISM
81%

TRANSPORT INFRASTRUCTURE
43%

PHIL CRONIN
CEO & Founder
tombola

tombola

WHAT WE DO

tombola is a family-owned company based in Sunderland which operates the biggest online bingo websites in the UK, Spain and Italy. Our approach is different to our competitors' as just about every aspect of tombola is managed in-house. We have created all of our own games and take pride in innovation, and the strength of the development and design teams.

WHY SUNDERLAND?

Affordable property, a hardworking local workforce and the steady supply of graduate talent from the region's five universities provide us with the resources and skills to grow the business continually.

DOMINIC EDMUNDS
CEO & Founder
SaleCycle

SaleCycle

WHAT WE DO

SaleCycle works with companies to make their entire customer journey better. We monitor every single touchpoint online to help inspire, shape and support conversions. From the moment someone lands on their website for the first time, through to follow-up purchases, we create dynamic customer journeys.

WHY SUNDERLAND?

This region has a very strong talent pool that the company has tapped into in order to grow rapidly in recent years. From this Sunderland base, SaleCycle has been able to build a great client list and expand across the globe, with offices now in Washington DC, Paris and Singapore.

GROWTH CHALLENGES

49%
LIMITED HIGHLY SKILLED WORKERS

42%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

29%
POOR TRANSPORT INFRASTRUCTURE

26%
LIMITED INVESTMENT OPPORTUNITIES

DIGITAL TECH ECONOMY JOBS
5,742

ADVERTISED DIGITAL SALARY
£38,895

ADVERTISED NON-DIGITAL SALARY
£30,953

DIGITAL BUSINESS CONCENTRATION
0.21 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[3]
£148 million

DIGITAL TECH STARTUP BIRTHS

46
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT

+18%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER

+101%
GROWTH 2011 – 2015

[3] Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Truro & Redruth

NOTABLE UNIVERSITIES
FALMOUTH UNIVERSITY |

NOTABLE WORKSPACES
CORNWALL INNOVATION CENTRES |
THE WORKBOX (PENZANCE) |
JUBILEE WAREHOUSE (PENRYN) |

NOTABLE MEETUPS & NETWORKS
CORNWALL DIGITAL |
MEETUP GROUP
AGILE ON THE BEACH |

NOTABLE ACCELERATORS
LAUNCHPAD |
SPARK |

TECH NATION 2017

From **TECH CITY**

WHAT'S THERE?
Cornwall's digital tech cluster might be small, but it is increasingly mighty – centred on Redruth and Truro, but expanding to Camborne, Falmouth, Newquay and beyond. People and businesses come for the coastal quality of life. They stay, however, for the community and the connectivity.

Superfast broadband means Truro now has more fibre connections than most European cities, while the sector is backed by a collaborative ecosystem. Founded in 2011, Software Cornwall has worked hard to turn once fragmented activity into a cohesive community.

What's more, the Digital Peninsula Network supports 700 members throughout Cornwall. The Agile on the Beach conference is a highlight of the digital tech scene, while Invest in Cornwall works to attract new businesses.

WHAT'S NEW?
Talent and skills are developing fast here. Falmouth University has set up an academy concentrating on the computer games industry, while Cornwall College has improved its computer courses to match industry needs and launched a new Software Degree.

The College has also teamed up with Bluefruit Software to launch their I Am Digital programme, helping students to earn their Technical Baccalaureate while working on real projects.

There is also increasing support for businesses from organisations like 'Spark' – a business development programme from Truro and Penwith Colleges – and networking opportunities such as the Software Cornwall Business Connect Event, held in January, (and last June), with 130+ attendees from digital tech businesses.

WHAT'S NEXT?
Plans are afoot to create Fibre Park, a business and education centre, while Superfast Cornwall is preparing to roll out further broadband upgrades.

AVERAGE HOUSE PRICE[1]
£148,125

[1]Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
12%

QUALITY OF LIFE
91%

DIGITAL GROWTH OPTIMISM
79%

TRANSPORT INFRASTRUCTURE
9%

CRAIG GIRVAN & TOBY PARKINS
Directors & Founders
Headforwards

headforwards™
Software Development. Onshore.

WHAT WE DO
Headforwards is an outsource software development company. We have a disruptive model that revolves around us building long lasting partnerships with our clients and providing them with dedicated teams of developers.

WHY CORNWALL?
Location is an important part of our brand, but it also plays a part in our recruitment and staff retention. Cornwall is a desirable location for developers to be based in, and being here helps us to attract global talent.

PAUL MASSEY
Director
Bluefruit Software

Bluefruit

WHAT WE DO
Bluefruit Software specialises in developing embedded software for quality-focused equipment manufacturers in the medical/scientific, automotive and consumer sectors.

WHY CORNWALL?
While there is a global shortage of digital tech skills, Bluefruit taps into the raw talent pool in Cornwall with a homegrown training strategy. This includes innovations such as the Digital Academy - a collaboration with Cornwall College.

GROWTH CHALLENGES

60%
LIMITED HIGHLY SKILLED WORKERS

53%
POOR TRANSPORT INFRASTRUCTURE

43%
LOW LEVELS OF AWARENESS OF A LOCAL DIGITAL INDUSTRY

33%
LIMITED INVESTMENT OPPORTUNITIES

DIGITAL TECH ECONOMY JOBS
1,380[2]

ADVERTISED DIGITAL SALARY
£31,322

ADVERTISED NON-DIGITAL SALARY
£29,767

DIGITAL BUSINESS CONCENTRATION
0.44 (medium)

DIGITAL GVA (AVERAGE 2013 - 2015)[3]
£39 million

DIGITAL TECH STARTUP BIRTHS

22
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011-15)

DIGITAL BUSINESS COUNT

+21%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 - 15

DIGITAL BUSINESS TURNOVER

+51%
GROWTH 2011 - 2015

[2]2016 Tech Nation Report data
[3]Source ABS/BSD, 2015. GVA refers to the total output of goods and services minus the value of the inputs such as the cost of production and taxes.

Worcester & Malvern

NOTABLE UNIVERSITIES
UNIVERSITY OF WORCESTER

NOTABLE COMPANIES
QINETIQ
DEEP SECURE
GKN

NOTABLE WORKSPACES
THE WYCHE INNOVATION CENTRE

NOTABLE MEETUPS & NETWORKS
MALVERN CYBER SECURITY CLUSTER
MALVERN FESTIVAL OF INNOVATION
THE KILN

WHAT'S THERE?

It might be known for bottled water and picturesque hills, but thanks to Winston Churchill, Malvern is on the frontline of the government's cyber security strategy.

In 1942, the then Prime Minister ordered that groundbreaking telecommunications research should move to this rarely bombed region.

Today, many of the area's cyber security and digital tech businesses are spinouts from what is now QinetiQ – the privatised arm of the Defence Evaluation and Research Agency, which is based in Malvern.

The 'cyber valley' has a strong focus on research and development and a healthy talent pool – at one time, Malvern was claimed to house more PhD graduates than any other non-university town.

The National Cyber Skills Centre is a key hub, while the Malvern Cyber Security Cluster represents more than 80 local businesses in the sector.

WHAT'S NEW?

Government has announced a further investment of £1.9 billion in its National Cyber Security Strategy. Technologies improving the UK's ability to withstand cyber attacks are already being developed at both the Wyche Innovation Centre and Malvern Hills Science Park.

The Science Park's Phase Five development is also under way, after it managed to secure a LEP investment of £4 million.

WHAT'S NEXT?

A modern data centre called Shield House will offer 1.5 megawatts of power to customers when it opens later this year.

TECH NATION 2017
From **TECH CITY UK**

AVERAGE HOUSE PRICE[1]
£209,072

[1]Land Registry Data, 2016

% RATE AS GOOD

TALENT SUPPLY
12%

QUALITY OF LIFE
95%

DIGITAL GROWTH OPTIMISM
56%

TRANSPORT INFRASTRUCTURE
11%

IAN WHITING
CEO & Founder
Titania

TITANIA

WHAT WE DO
Titania develops cyber security auditing software used by organisations in more than 80 countries. Our unique technology quickly and easily identifies security weaknesses on computer networks, helping to harden systems against attack.

WHY WORCESTER?
With the National Cyber Skills Centre and Malvern Science Park on our doorstep, and construction of the Worcester Six Business Park starting this year, the county offers lots of opportunities for startups and expanding business to thrive. For those who like to be surrounded by beautiful countryside, Worcestershire offers a perfect alternative to living and working in the larger cities.

EMMA PHILPOTT
CEO & Founder
The IASME Consortium Ltd

WHAT WE DO
The IASME Consortium is an accreditation body appointed by the Government. Together with our nationwide network of certification bodies, IASME certificates organisations to the 'Cyber Essentials' scheme.

WHY WORCESTER?
Malvern's cyber expertise and innovation are world-renowned. Being located in the area allows us to network with, and have access to, world-class knowledge.

GROWTH CHALLENGES
62%
LIMITED HIGHLY SKILLED WORKERS

39%
POOR TRANSPORT INFRASTRUCTURE

38%
LIMITED DIGITAL INFRASTRUCTURE

31%
LIMITED SUPPLY OF APPROPRIATE PROPERTY ON COMPETITIVE TERMS

DIGITAL TECH ECONOMY JOBS
7,687

ADVERTISED DIGITAL SALARY
£36,236

ADVERTISED NON–DIGITAL SALARY
£29,933

DIGITAL BUSINESS CONCENTRATION
0.69 (medium)

DIGITAL GVA (AVERAGE 2013 – 2015)[2]
£239 million

DIGITAL TECH STARTUP BIRTHS
72
THE AVERAGE NUMBER OF STARTUP BIRTHS PER YEAR (2011–15)

DIGITAL BUSINESS COUNT
+11%
INCREASE IN NUMBER OF DIGITAL TECH BUSINESSES 2011 – 15

DIGITAL BUSINESS TURNOVER
+26%
GROWTH 2011 – 2015

Defining the digital tech economy

The digital tech economy consists of digital roles within the digital sector and digital roles within non-digital, traditional industries.

NATIVES
Digital roles within digital organisations eg: software developers, UX designers, digital marketers

SUPPORTERS
Non-digital role within digital organisations eg: accountants, lawyers

.com

1.64M
UK DIGITAL INDUSTRY JOBS

0.94M
SUPPORTERS + NATIVES
(Source: BSD, Tech City UK, 2015)

SUPPORTER ROLES

0.7M
JOBS IN TRANSFORMER ROLES
(Source: APS, 2015)

29.6M
TOTAL UK JOBS IN NON-DIGITAL/TRADITIONAL INDUSTRY
(Source: BSD, 2015)

TRANSFORMERS
Digital roles within non-digital organisations eg: data scientist in the public sector

TECH NATION 2017

From

TECH CITY UK

Glossary

Digital tech cluster – A critical mass of digital technology businesses within an urban location, which interact formally (e.g. by trading or forming partnerships) and informally (e.g. networking, socialising).

Digital job ads – Online job advertisements for digital occupations (see methodology). (Source: Burning Glass)

Digital productivity – Nationally based on GVA per worker. (Source: ONS Annual Business Survey/ONS Business Structure Database)

Digital salary growth – % change of average yearly salary in digital job ads between 2012 and 2016. (Source: Burning Glass)

Digital tech economy – Jobs in the digital tech industries plus digital jobs in non-tech industries. (Source: ONS Annual Population Survey)

Digital tech employment/workforce – all digital and non-digital jobs in digital industries (see methodology). (Source: ONS Annual Population Survey)

Digital tech industries – Businesses operating in 4-digit Standard Industrial Classification (SIC) codes according to a classification developed by Nesta (see methodology). (Source: ONS Business Structure Database)

Digital tech business – A company that provides a digital technical service/product (including hardware and platforms) as its primary revenue source OR provides a product/service that is reliant on digital technology as its primary revenue source.

Digital tech jobs – Jobs classified as 'information economy occupations' according to the Nesta definition. (Source: ONS Annual Population Survey)

GVA (Gross Value Added) – GVA measures the contribution of each economic unit by estimating the value of an output (goods or services) less the value of inputs used in that output's production process. (Source: ABS/BSD)

High-growth businesses - Businesses with ten or more employees that are in the top 10% of all companies in terms of annual turnover growth. (Source: BSD)

Location quotient - This indicates the geographic concentration of digital business turnover relative to the UK. A score above 1 indicates relative digital tech specialisation in a cluster. A score below 1 indicates relative lack of specialisation. (Source: BSD)

Local economy/regional economy – Regional economy refers to high-level official geographies (government office regions in England, and Scotland, Wales and Northern Ireland). Local economy refers to a higher-resolution geography which, in Tech Nation 2017, is based on the ONS 2011 Travel to Work Areas.

Meetup – Meetup.com is an online social networking portal that facilitates offline group meetings in various localities around the world.

Non-digital industries – Those 4-digit SIC industries not classed as digital tech industries in the Nesta definition.

Digital tech investment – Finance available from private individuals or companies such as friends and family, angel investors, institutional venture capital funds or corporate venture capital funds.

Scale-up – A company that is growing exponentially. Typically it will have received a number of funding rounds to support its growth.

Standard Industrial Classification (SIC) industries/codes – A set of internationally agreed codes used to classify businesses into industries.

Startup – Company with a minimum viable product, working towards establishing a repeatable and scalable business model.

TTWA (Travel to Work Area) – A standardised unit of UK geography (see methodology). (Source: ONS)

Turnover – The amount of money taken by a business in a particular period. (Source: BSD)

Methodology

Measuring and mapping the digital tech industry is challenging. Our innovative approach uses methodologies created and developed by Nesta and Tech City UK. We combine official economic statistics with other varied data sources in order to estimate the true scale and capabilities of digital tech in the UK.

ECONOMIC STATISTICS

We have used official data sources to estimate economic statistics about the digital tech economy. This is based on the most rigorous selection of 'digital' standard industrial classification (SIC) and standard occupational classification (SOC) codes available.

TABLE 1: DIGITAL TECH SOC CODES

1136 IT and telecommunications directors

2133 IT and specialist managers

2134 IT project and programme managers

2135 IT business analysts, architects & system designers

2136 Programmers & software development professionals

2137 Web design & development professionals

2139 IT & telecommunications professionals not elsewhere classified

3131 IT operations technicians

3132 IT user support technicians

5242 Telecommunications engineers
5245 IT engineers

TABLE 2: DIGITAL TECH SIC CODES

26.20 Manufacture of computers and peripheral equipment

58.21 Publishing of computer games

58.29 Other software publishing

61.10 Wired telecommunications activities

61.20 Wireless telecommunications activities

61.30 Satellite telecommunications activities

61.90 Other telecommunications activities

62.01 Computer programming activities

62.02 Computer consultancy activities

62.03 Computer facilities management activities

62.09 Other IT & computer service activities

63.11 Data processing, hosting & related activities

63.12 Web portals

95.11 Repair of computers & peripheral equipment

Although updated relatively infrequently, official economic statistics enable us to derive the employment, productivity and value added estimates in this report. Furthermore, they make it possible to track the progress of the digital tech

industry on a consistent basis, drawing robust comparisons with our Tech Nation 2016 report.

Our starting point was to define our digital tech clusters using Office for National Statistics (ONS) 2011 travel to work areas (TTWAs). In a few instances - Bristol & Bath, Cardiff & Swansea, and Bournemouth & Poole - we have combined TTWAs to better represent a digital tech cluster.

Our partner Frontier Economics provided measures of economic performance from the following official ONS datasets:

1. THE ANNUAL POPULATION SURVEY (APS)
The APS is a household survey with information about respondent's occupation (SOC) and Industry of employment (SIC). We used it to estimate employment in the digital tech industries and the digital tech economy. Crucially, the APS has allowed us to capture digital embeddedness, that is digital experts working in non-digital industries. Furthermore, it also covers freelancers and self-employed workers, an important component of the digital workforce.

2. THE BUSINESS STRUCTURE DATABASE (BSD)
This is an administrative dataset which includes SIC, location, employment and turnover data for all UK businesses registered for PAYE/VAT.

3. THE ANNUAL BUSINESS SURVEY
This survey captures detailed financial data as well as SIC and location information, allowing the estimation of approximate GVA figures.

Where possible, we have used these ONS datasets to produce estimates of employment, turnover, and digital tech GVA at the national and local levels. One barrier to doing this with digital tech GVA is that ABS data is not available at the TTWA level. Our partner Nesta has helped us to address this by estimating digital employment based on BSD data. We advise caution in the interpretation of this statistic.

OTHER DATA SOURCES

1. ONLINE JOBS DATA
Burning Glass provided a dataset containing detailed information about job ads posted online in the UK in 2016, including location (using TTWA 2001 codes), role, occupation, skills required and salary.

2. GITHUB - ONLINE SOFTWARE DEVELOPMENT ACTIVITY
Our partner We are Flint scraped Github's open API in November 2016 to access data about recently active developers in the UK and across Europe. This dataset contains information about their location and their programming languages.

3. MEETUP - LOCAL INDUSTRY NETWORKING
Our partner We are Flint scraped data about tech meetup groups and tech meetup members/attendees from Meetup's open API in November 2016.

4. PITCHBOOK – INVESTMENT DATA
We accessed data on venture capital and private equity activity in the UK and Europe from the Pitchbook database (downloaded February 2017).

5. JLL – COMMERCIAL PROPERTY DATA
Our partner JLL provided prime office floorspace rents (quoted in £/sqft/year). Prime rent represents the top open-market rent expected for a notional unit of the highest quality and specification in the best location in the market.

6. LAND REGISTRY – HOUSE PRICE DATA
We used Land Registry data (in October 2016) to determine average house prices in each of the 30 clusters. For ease of comparison we used the average price of a semi-detached house in each cluster.

7. SURVEY DATA
The Tech Nation 2016 survey was conducted between 15 November and 5 December 2016. The survey received 2,732 completed responses. Of these, 1,841 were with digital tech businesses and 891 completed interviews were with members of the ecosystem such as investors, accelerators and universities.

TECH NATION 2017

WITH SUPPORT FROM OUR PROJECT PARTNERS

frontier
economics

nesta

burningglass
CAREERS IN FOCUS

PitchBook

GitHub

JLL

Meetup

Community Leads

WITH KIND SUPPORT FROM OUR LEAD COMMUNITY PARTNERS

Corporate Partner

REGGIE BRADFORD

ORACLE SVP
STARTUP ECOSYSTEM & ACCELERATOR

ORACLE Integrated Cloud
Applications & Platform Services

As the original Silicon Valley startup, Oracle knows a thing or two about tech startups and the conditions that bring about their success. The UK has established itself as an innovation hub and has built an enviable startup culture that extends beyond the capital; this year's Tech Nation Report reveals startups are now prevalent in almost every corner of the country.

The past 12 months have been characterised by business uncertainty, but for entrepreneurs this presents an opportunity. Incubators, accelerators and regional development agencies have worked wonders nurturing startups, creating environments for collaboration to thrive, and expanding the UK's tech economy beyond London. As a result, overseas talent and investment from global companies (including Oracle) is flocking to the country and driving the development of the next wave of innovative businesses.

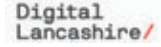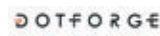The UK Government and business community has created a global centre of excellence for supporting great ideas at an early stage. It is proudly enabling these ideas to grow into viable businesses, which then help to attract further talent and investment into the UK, and ultimately work to bolster the economy – a fact which this report compounds.
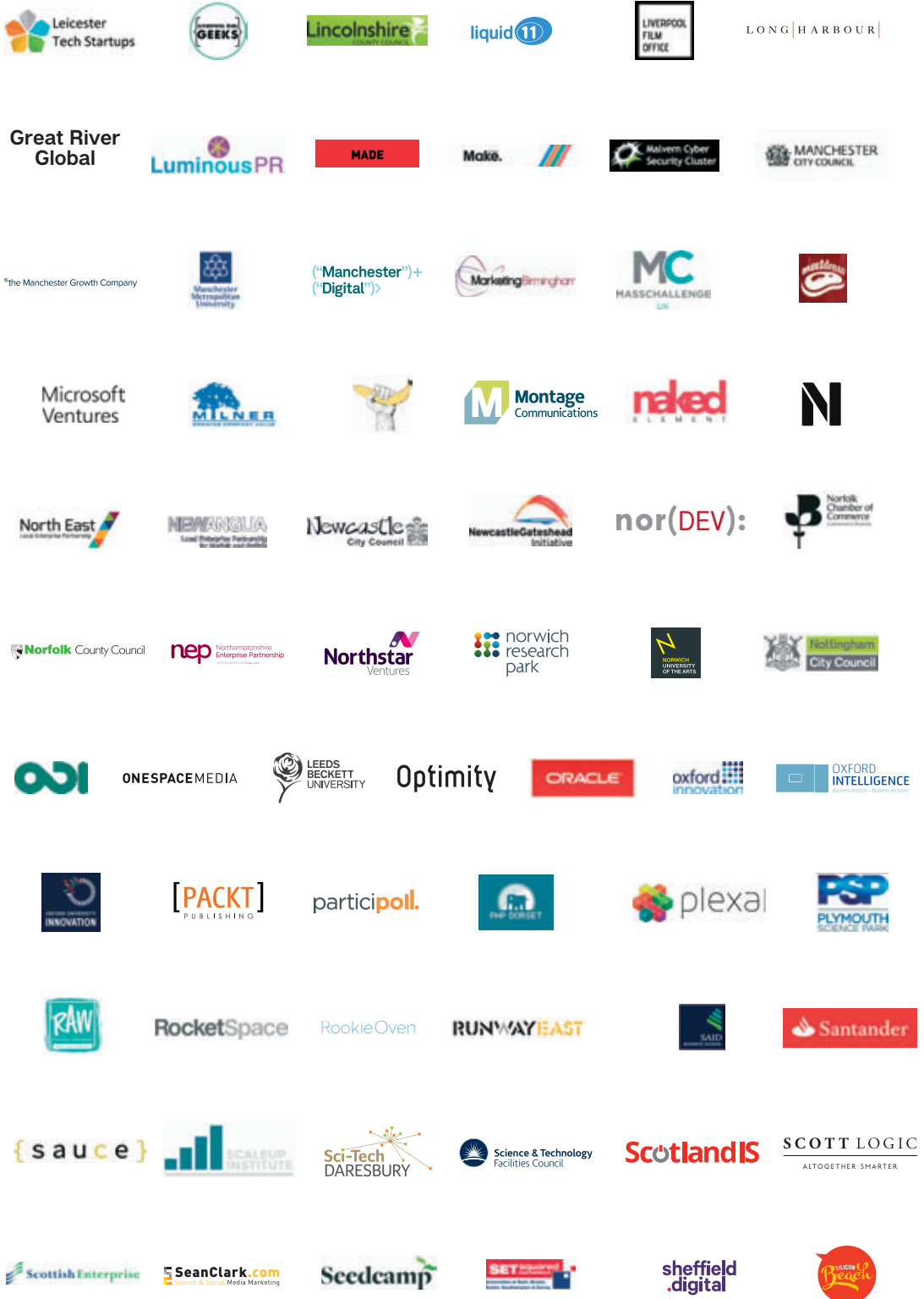
Community Partners

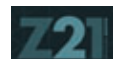With gratitude to our **220+** Community Partners across the UK

Community Partners

With gratitude to our 220+ Community Partners across the UK

Leicester Tech Startups

GEEKS

Lincolnshire COUNTY COUNCIL

liquid 11

LIVERPOOL FILM OFFICE

LONG HARBOUR

Great River Global

LuminousPR

MADE

Make.

Malvern Cyber Security Cluster

MANCHESTER CITY COUNCIL

*the Manchester Growth Company

Manchester Metropolitan University

("Manchester")+ ("Digital")>

Marketing Birmingham

MASSCHALLENGE UK

Microsoft Ventures

MILNER

Montage Communications

naked ELEMENT

N

North East Local Enterprise Partnership

NEWANGLIA Local Enterprise Partnership for Norfolk and Suffolk

Newcastle City Council

NewcastleGateshead Initiative

nor(DEV):

Norfolk Chamber of Commerce

Norfolk County Council

nep Northamptonshire Enterprise Partnership

Northstar Ventures

norwich research park

NORWICH UNIVERSITY OF THE ARTS

Nottingham City Council

ODI

ONESPACEMEDIA

LEEDS BECKETT UNIVERSITY

Optimity

ORACLE

oxford innovation

OXFORD INTELLIGENCE Business analysis · Business decisions

INNOVATION

[PACKT] PUBLISHING

participoll.

PHP DORSET

plexal

PSP PLYMOUTH SCIENCE PARK

RAW

RocketSpace

RookieOven

RUNWAYEAST

SAID BUSINESS SCHOOL

Santander

{ s a u c e }

SCALEUP INSTITUTE

Sci-Tech DARESBURY

Science & Technology Facilities Council

ScotlandIS

SCOTT LOGIC ALTOGETHER SMARTER

Scottish Enterprise

SeanClark.com Search & Social Media Marketing

Seedcamp

SETsquared

sheffield .digital

SILICON Beach

At Tech City UK, we believe great tech companies come from strong ecosystems. We help nurture them.

TECH NATION 2017

From TECH CITY UK