

Leeds City Region FinTech ECOSYSTEM REPORT

Summary Report, Findings & Recommendations
November 2018



Leeds City Region FinTech Ecosystem Report 2018

The growing ambition of key stakeholders in the Leeds City Region has culminated in this detailed analysis of the Leeds FinTech sector. Mapping out the market, stakeholders and ecosystem as they currently exist helps to provide clarity on the weaknesses and opportunities for competitive advantage for the region, which can help underpin economic growth and investment.

This report details the output of a comprehensive analysis to better understand the dynamics and characteristics of the FinTech ecosystem in the Leeds City Region. This analysis has included:

- 47 predominantly face-to-face interviews with key regional stakeholders.
- An online survey with a further 97 participants from across the regional FinTech ecosystem.
- Extensive desk research conducted over a 4-month period.
- Insights gathered from numerous meetings and discussions which took place during the period within which the report was compiled.

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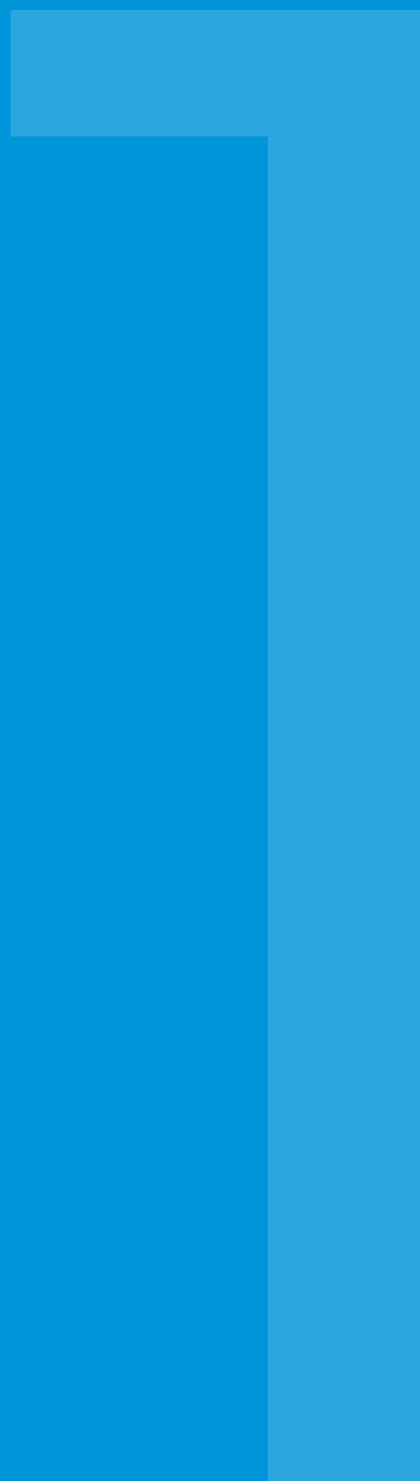
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INTRODUCTION



Introduction

We are delighted to share with you this assessment of the Leeds City Region FinTech Ecosystem. This is the first time that such a comprehensive analysis has been undertaken in the region, and we hope that it provides a foundation for clear recommendations as well as future analysis.

For many years, Leeds City Region has had a vibrant and diverse Financial Services industry which has been supported and enhanced by Data, Technology and Digital sectors.

The Leeds City Region is the UK's largest economy and population centre outside of London. It is home to 119,000 companies with an economy valued at £66.5bn per annum, of which Leeds itself accounts for an estimated £21.3bn.

Published in 2017, the Leeds Inclusive Growth Strategy sets out 12 'big ideas' for the Region, including a key focus on skills, infrastructure and digital economy. The strategy lists Financial and Professional Services as key sectors, with FinTech cited as an 'emerging sub-sector' at that time.

Developing a competence and reputation in FinTech is firmly on the agenda of a number of key regional stakeholders including Leeds City Council, Leeds City Region LEP, Department for International Trade, and the regionally-based universities. In addition, FinTech capabilities and developments are increasingly valued and sought by the number commercial organisations operating across the spectrum of Financial Services.

The LEP has previously positioned Leeds as the 'FinTech Capital of the North', which is a clear indication that the region has much to gain from the exponential growth of FinTech in the UK and globally.

Furthermore, given the economic, skills and industry benefits available, there is increasing interest from the FCA, HM Treasury and Innovate Finance in placing an increased focus on the regional development of FinTech initiatives, particularly across the Northern Powerhouse.



Over the last two years, various stakeholders from public and private sectors have become increasingly active in FinTech in the Leeds City Region, resulting in increasing demand for co-ordination and collaboration.

Consequently, it has become widely acknowledged that a detailed analysis of the Leeds FinTech Ecosystem was needed to map the environment, engage with stakeholders and assess the current state of the ecosystem, as it currently exists, and to help provide actionable recommendations to further development and expansion.

We are delighted to have worked with key stakeholders and sponsors from the Leeds City Region to produce this report, which it is hoped will set a foundation for future growth for this exciting and rapidly developing sector.

Richard Coates
Managing Director
Whitecap Consulting

FOREWORDS





Tom Riordan

Leeds City Council is delighted to be supporting this FinTech ecosystem research. It is of strategic importance to the Leeds City Region and further strengthens the Financial and Professional Services network.

In the Leeds Inclusive Growth Strategy 2018-2023, we have made a commitment to develop Leeds as a centre of excellence in FinTech by supporting people with skills and training, providing high quality and affordable places for businesses and increasing productivity by exploring new technologies including blockchain, artificial intelligence and machine learning. With momentum in the FinTech sector becoming increasingly evident in the last few years, there is a definite need for a new in-depth study of the sector.

Whitecap Consulting has had an active involvement in many of the FinTech-related initiatives in Leeds over the last six years, including their involvement in co-founding and running the FinTech North events over the last three years which have played a pivotal role in building the FinTech community in Leeds. This research has been the first and most comprehensive exploration into the City Region's FinTech ecosystem for several years and the mapping of the wide-ranging assets across the region provides some valuable insights and detailed analysis that not only identifies unique strengths but also recommends where we can provide action and steer towards the future growth of this rapidly developing sector.

A recent delegation to Boston allowed us to see for ourselves and learn some valuable lessons from established world-leading ecosystems in FinTech, MedTech, health innovation and education, as well as gain inspiration and mutual opportunity for further investment and idea sharing. The visit also raised the profile of Leeds and is part of a drive for Leeds to develop

international relationships with global centres of excellence like Boston, which has similar characteristics and economic strengths to Leeds. Earlier in the year Leeds was announced as being chosen for the prestigious Regional Entrepreneurship Acceleration Programme leadership programme run by the world-famous Massachusetts Institute of Technology (MIT). The University of Leeds / MIT partnership will allow us to learn alongside eight regions across the world and open up new opportunities for our businesses, academics and policy makers.

The changing face of Leeds with the new South Bank, HS2, Innovation District and Nexus, along with other developments, will provide further opportunities for not only FinTech in Leeds, but for the whole region in terms of employment, collaboration, place and inclusion. With large scale employment of 229,000 across the Leeds City Region, of which 98,000 are in Leeds, the Financial and Professional Services sector has a great opportunity to promote social mobility and tackle inequality. Through innovative finance solutions and new channels for open financial advice, FinTech products developed by businesses in our region can provide a real opportunity for all to benefit.

There is much to be proud of in the region and we have a great story to tell. We have a diverse talent pool, world-class assets and innovative businesses and the ambition to be the best. The Council, universities, schools, innovators and entrepreneurs have all played their part in creating growth. I believe this ecosystem research will provide further narrative on the strength of the FinTech sector here in Leeds and Yorkshire and further promotes Leeds as a FinTech centre of excellence.

Tom Riordan
Chief Executive Officer
Leeds City Council



Dr Chris Sier

Leeds is a city with which I have a long-standing association and it is my pleasure to provide some opening comments to this important report into FinTech in the Leeds City Region.

The well documented banking and Financial Services heritage in Leeds is supplemented and complemented by a thriving digital sector, world class universities, and a supportive and ambitious public sector.

The UK has a core strength in Financial Services and a forward-thinking regulator who is increasingly focusing on supporting the development of the regional Financial Services economy. In the context of FinTech, the FCA Sandbox is the place where innovation is nurtured and encouraged, and this programme is location agnostic but to date has been under-utilised by northern-based organisations.

The regional FinTech economy has also received encouragement from HM Treasury, who have created a number of FinTech Envoy roles across the UK, of which I am privileged to be one. The role of the Envoys is to champion the regions and ensure their voice is heard in London, which of course is a global FinTech hub.

London's role in the global FinTech economy is a significant one, but I strongly feel the regional cities of the UK have much to offer on a national and international basis, with the Northern Powerhouse perhaps the region with the most potential.

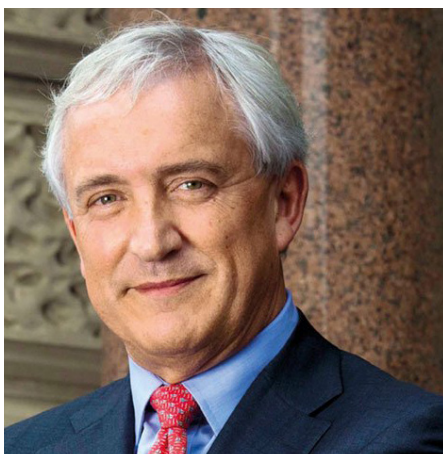
I would like to see an increasing amount of collaboration across the northern cities, and as a major Financial Services sector that is home to major banks, building societies and other established financial organisations, Leeds has a central role to play in the evolution of FinTech in the Northern Powerhouse.

On the theme of collaboration, Leeds is home to FinTech North, a not-for-profit organisation that was established in 2016. FinTech North is developing a FinTech community across the north but is an initiative that was created in Leeds which is something the city can be very proud of.

This report provides a view of FinTech in the Leeds City Region at a moment in time. The challenge for all the stakeholders in the region is to ensure that the huge potential of the FinTech economy in the region is realised over the coming months and years.

Leeds is a city with the world at its feet on many fronts, most definitely including FinTech.

Dr Chris Sier
HM Treasury FinTech Envoy
& Chairman, FinTech North



David Duffy

At Clydesdale Bank, Yorkshire Bank and Virgin Money (CYBG) we're passionate supporters of driving economic growth and prosperity right across the country, especially in our heartland communities across the North.

With over 150 years of proud history supporting the economy in Yorkshire, particularly in Leeds, we are delighted to be supporting this project with our partners at Whitecap Consulting and Leeds City Council.

These are challenging, but exciting times. New technologies are changing the way we go about all aspects of our lives.

This is especially true for Financial Services with Open Banking paving the way for new entrants, including FinTechs, with the potential to transform our industry and deliver a new generation of products and services to consumers.

As a country, we are well placed to benefit from this industrial revolution happening across the globe.

Over the first half of this year, the UK's FinTech industry attracted over \$16bn investment, more than any other country. That's over half the total FinTech investment into Europe as a whole.

FinTech will be an increasingly important economic contributor to the Northern Powerhouse with Leeds and Manchester becoming recognised as FinTech hubs.

But we know that disparities exist between the north and London and the south east.

In my role as a Government FinTech Envoy supporting the Government's FinTech Sector Strategy, one of my top priorities is ensuring that a FinTech in Leeds has the same opportunities to develop and grow as a FinTech in London.

Access to capital is a real issue for FinTechs in the north. The British Patient Capital scheme will help FinTechs connect to capital elsewhere and the Sector Strategy is assisting firms access new markets overseas helping place the UK at the front of the pack as a global centre for FinTech.

Here at CYBG we have committed £6 billion of new lending to SMEs to 2019 with lending available to support firms across the FinTech sector.

If the FinTech sector is to fulfil its potential, partnership between FinTechs and established Financial Service providers will be key to giving FinTech access to customers to help them to scale up and we are currently working with a number of FinTech partners to bring market leading products and services to our customers.

If we – business, government, investors – continue to work together in this manner, we really do have a great opportunity to build a truly international FinTech centre of excellence right here in Leeds and across the Northern Powerhouse.

David Duffy
HM Treasury Fintech Envoy
& CEO, CYBG

With thanks to all participants & sponsors

This research has been made possible by the support of a number of key stakeholders in the Leeds City Region, and we are extremely grateful for the help they have provided to support the project in numerous ways.

Leeds City Council was the first partner to pledge support, and it has since been supported by a combination of public sector, private sector and higher education organisations; all of whom are key players in the FinTech ecosystem.

Leeds Beckett University is in the process of conducting research into FinTech hubs and some of their early analysis has been referenced in this report.

We are also grateful for the time and insight shared by participants across the Leeds City Region during the course of researching and producing this report.

EQUINITI

bruntwood



first direct bank



NEXUS
UNIVERSITY OF LEEDS

UNIVERSITY OF LEEDS



FINTECHNORTH



EXECUTIVE SUMMARY



Leeds - a prime location for FinTech innovators



When the term 'FinTech' emerged, the narrative around it was primarily focussed on the promise of disruption and disintermediation of incumbent Financial Services business models and processes. Whilst there has been some evidence of that being borne out, the narrative is now largely characterised by a desire for collaboration between FinTech businesses and incumbents.

This desire for collaboration is consistently articulated by start-ups, corporates, public and private sector organisations, investors and advisors, and also for cities and regions

The Leeds City Region FinTech Ecosystem is in a strong position in terms of:

- its Financial Services, Data and Technology heritage and organisations
- the demand for FinTech innovation from established corporates
- the availability of professional advisors and investors across the region

- the current level of collaboration, engagement and profile within FinTech community, and
- its intent to develop skills and capabilities to support FinTech expansion.

However, the region has yet to fulfil its FinTech potential given the current lack of FinTech start-up and scale-up firms located in the region. To this extent, the ecosystem is only partially formed.

To realise this, co-ordination, collaboration and investment across public, private and higher education sectors is critical to create the right environment within which all FinTech initiatives, at whatever stage of maturity, can thrive and grow over the long-term.

Summary of key findings

Leeds has a major Financial Services presence that represents a major opportunity for FinTech which is currently not being realised to its full potential.

1



In order to attract more inward investment the FinTech sector in the Leeds City Region requires leadership and communication that works across public sector, higher education and Financial Services and utilises existing success stories within the sector as focal points.

2

There is a requirement for one or more physical spaces in Leeds, devoted to FinTech, to attract, develop and grow FinTech firms and encourage collaboration with established Financial Services organisations.

4



Leeds has an underdeveloped ecosystem with few start-up and scale-up firms in FinTech related fields and can do more to encourage early stage innovation. The Financial Services corporates are ready to partner and collaborate with new FinTech ventures, but the current volume of early stage FinTechs is insufficient.

3



The communication and engagement between funders and FinTech innovators is not working effectively, which appears to be hampering the funding opportunities for early stage FinTech firms in the region.

5



There is significant potential and interest for businesses and universities to work together on FinTech related projects, research activities and development of academic courses.

6



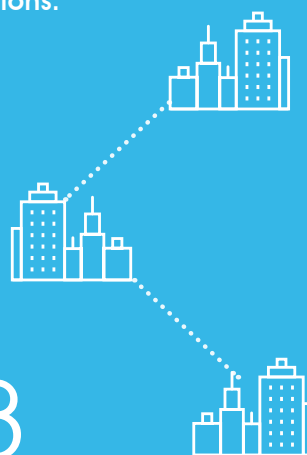
FinTech shares underlying technologies with other rapidly growing Tech sectors, such as HealthTech and Data Analytics. As a result, there are substantial intellectual capital, capabilities and commercial success stories that the region can capitalise on and communicate effectively with potential inward investors.

7



There is a bigger prize to be won by unlocking the potential of FinTech capability across the Northern Powerhouse, but to do this requires increased collaboration with other city regions.

8



Summary of key recommendations

Develop a regional FinTech strategy that supports the key stakeholders ranging from start-ups to corporates, which can support the creation of a balanced, resilient and sustainable ecosystem in the Leeds City Region.

1



Enhance leadership and communication by creating a regional executive board and developing a FinTech engagement and communications strategy.

Develop the ecosystem of start-ups and scale-ups, working with key stakeholders to develop programmes, competitions and providing access to critical resources such as sandboxes.

3



Create more physical space(s) for FinTech collaboration within the region. These could be bespoke developments in the Leeds City Region or could involve existing FinTech hub providers extending into the region.

4



2

Enhance the links between funders and FinTech innovators, by providing more clarity around the FinTech funding options available and how they can be accessed, and by considering a specific FinTech fund.

5



Develop the links between business and universities, aiming to build key strengths via collaborative work on areas including financial inclusion, RegTech, retail and SME lending, and Data Analytics.

6



Leverage the region's existing and emerging strengths in adjacent Tech sectors including AI, HealthTech, Data Analytics and Smart Cities.

7



Identify unifying priorities across the Northern Powerhouse, helping drive and develop initiatives in collaboration with other regions.

8



Successful implementation of the recommendations in this report would drive increased inward investment in the FinTech sector in the Leeds City Region.

Leeds City Region - FinTech Ecosystem Overview





Key findings for Leeds City Region

1. Leeds has a major Financial Services presence that represents a substantial opportunity for FinTech which is currently not being realised to its full potential.

- 51% of respondents stated that FinTech was either important or a central focus for their organisation. 88% of the organisations represented undertake some form of FinTech activity in the Leeds City Region. 99% of organisations surveyed think that the number of their employees working in FinTech will increase by 2020.
- Multiple major Financial Services brands surveyed said they were actively looking for FinTech partners but could not currently find them in the Leeds City Region and have no regionally focused initiatives in place to address this.
- First Direct, Yorkshire Bank, Yorkshire Building Society, Leeds Building Society, Skipton Building Society all have their head offices in the region. All three main credit referencing companies have an operating base here, with Transunion UK (formerly Callcredit) and Equifax having their largest UK offices in Leeds, and Experian also having offices in Leeds and Bradford.
- In comparative terms, Leeds has a large banking sector compared to London, with proportionally more than twice as many banking jobs within the workforce as Greater London. The Leeds City Region's total workforce of 780,000 represents 9% of the size of London's, but the banking sector in Leeds, Bradford, Halifax and York alone is 19% of the size of the capital's, including 29,000 jobs¹.
- In contrast, it is estimated the FinTech sector in Leeds City Region accounts for 5% of total financial sector employment, whereas in London the FinTech sector is estimated to account for 15.2%² of financial sector jobs. Within a financial sector workforce of 52,000, Leeds has an estimated 2,600 FinTech workers³.
- 44% of the organisations interviewed stated that FinTech covers significant or major parts of their activities. By 2020, our findings showed this is expected to increase to 74% of organisations, indicating strong growth potential in the Leeds City Region in less than two years. As the vast majority of these organisations are established, their growth is likely to also positively increase the opportunity for start-up and scale-up FinTechs to work with them.

"FinTechs are strategically important to us as they will help us to deliver a better service to our customers'."

Nick Harrison, Commercial Director, First Direct

¹TheCityUK, 2018: 'Enabling growth across the UK 2018'. www.thecityuk.com

²South Mountain Economics, 2014, in London & Partners: London's FinTech Scene at a Glance, 2017

³Office for National Statistics, 2017: BRES 2017 Survey Data

2. In order to attract more inward investment the FinTech sector in the Leeds City Region requires leadership and communication that works across public sector, higher education and Financial Services and utilises existing success stories within the sector as focal points.

- Our interviews identified a clearly articulated ask for all key regional stakeholders to deliver better publicity outside of the region. This needs to be coupled with a consistent FinTech identity to highlight the benefits of investing in the Leeds City Region.
- Clarity is required on who leads the FinTech sector in Leeds City Region, to provide a focal point. This could be an individual, an organisation or a group of organisations.
- The Leeds City Region has some strong case studies such as Callcredit, Sky Bet, ODI, BJSS, Equifax, CYBG, and First Direct – all of which can be promoted as regional success stories in the broader Financial Services and Technology industries, which can be used to help make the region more attractive to FinTech activity.
- The message needs to be clearly articulated and strategically aligned with the requirements of national and international businesses, whether these are of global scale or are early stage innovators.
- The interviews revealed a lack of consistent message across key stakeholders, and in many instances a lack of confidence to talk knowledgeably about the regional FinTech sector. It is hoped the findings of this report might help start to address this.
- Leeds is undoubtedly the focal point of FinTech in the region, and its reputation and resource base are advantages for the other cities and towns in the Leeds City Region.

"If the Leeds City Region can create and promote the right environment and balance some of the centres of gravity with London, then it can become a centre for FinTech start-ups and scale-ups, not just for corporates."

**Richard Coates, Managing
Director, Whitecap Consulting**

3. Leeds has an under-developed ecosystem of start-up and scale-up firms in FinTech-related fields and can do more to encourage FinTech innovation in early stage businesses, including scale-ups.

- According to Tech Nation, Leeds has the highest number of scale-up digital companies outside the south east.¹
- 76% of organisations interviewed stated that they saw start-up and scale-up FinTech firms as the factor most likely to have a positive impact on the growth of the Leeds City Region.
- Many of the large Financial Services brands in Leeds do not currently have action plans in place to support regional FinTech activity. 38% of survey interviewees considered that FinTech represented an opportunity or challenge to their business, illustrating that a significant number of Financial Services businesses still need to develop a FinTech strategy.
- Opportunities are being missed to work with the established brands:
 - CYBG and First Direct have been front-runners in creating FinTech innovations via partnerships with third parties, but both achieved this with firms based outside of the Leeds City Region. In the example of First Direct, they partnered with Bud, a FinTech with its origins in Harrogate which set up in London where it benefited from being part of an accelerator community and programme.
 - Addleshaw Goddard runs AG Elevate, an accelerator programme to build UK & international FinTechs. The firm has a large presence in Leeds but so far none of the cohort members have come from the Leeds City Region.
 - At the start of 2018, Natwest launched four FinTech accelerators across the UK, choosing London, Bristol, Manchester and Glasgow as the locations.
 - Sky Bet ran a CoLab programme in 2017 to find start-ups from across the UK to work with it on FinTech-related challenges such as Open Banking but received no applications from Leeds City Region.

"Almost all of the FinTechs we get introduced to are from London. I'm confused why I don't get more requests for meetings from regional FinTechs."

Mark Davison, former Chief Data Officer, Callcredit (now Transunion UK)

¹Tech Nation, 2017: Tech Nation 2017, At The Forefront of Global Digital Innovation

4. There is a requirement for one or more physical spaces in Leeds, devoted to FinTech, to attract, develop and grow FinTech firms and encourage collaboration with established Financial Services organisations.

- There are currently no predominantly FinTech focused innovation hubs, sandboxes, incubators or accelerators in Leeds, which makes it a challenging environment within which to start a FinTech venture. As the case studies of London, Boston or Tallinn clearly demonstrate, the number of (commonly not-for profit) incubators and accelerators is in direct correlation to the number of regional, national and international start-ups it attracts.
- When asked which area requires the most attention / development for FinTech to grow and develop over the next 2-3 years, 15% of interviewees cited a requirement for innovation hubs or accelerators, ranking this higher than skills (14%) and transport (11%).
- There is no FinTech-focused support in Leeds City Region to help scale up successful start-ups or early stage businesses.
- With the exception of FinTech North, which is currently primarily events-focused, there is no focal point for the FinTech community in Leeds.
- To date the FCA Sandbox has had 4 cohorts including 122 firms pass through it, but only one firm has been from the Yorkshire region.
- Leeds has nothing comparable on any scale to the FinTech innovation / acceleration programme similar to the Mass Challenge programme in Boston, which takes in cohorts of start-ups for a 4-month programme with no fees to the entrepreneurs at all. The building is provided by the city, and running costs are covered via corporate sponsorship.
- There are limited partnerships with data and technology partners to make incubators, accelerators and sandboxes an attractive destination for FinTech start-up and scale-ups, unlike successful hubs such as the FCA's FinTech Sandbox or the Boston FinTech Sandbox.
- This is something that a FinTech venue of some form could provide. This would help develop the regional community and would also provide a destination for the increasing number of inbound trade delegations with an active interest in FinTech.

"It's about having access to the local ecosystem which is key to us and being able to act more rapidly and with agility."

**John Holdsworth, Core Services
Development Director, Vocalink**

5. The communication and engagement between funders and FinTech innovators is not working effectively, which appears to be hampering the funding opportunities for early stage FinTech firms in the region.

- In 2018 Leeds has seen two FinTech-related 'unicorns' created through the £1bn+ sales of Callcredit and Sky Bet respectively, but there is little evidence of FinTech investment in smaller businesses.
- 23% of people surveyed for this research said that funding was the most important factor to help drive growth of FinTech activity within the Leeds City Region. Only collaboration, co-ordination and communication ranked higher (jointly 25%).
- A report by Capital Pilot found that between 2013-17 there was £2.73bn of investment raised in the UK across 1,279 rounds of investment. 39% of the 569 UK FinTech start-ups researched had been through an accelerator, but at the time of writing this report the only accelerator currently open to FinTechs in Leeds was the NatWest Entrepreneurial Hub.
- GP Bullhound informed us in September 2018 that disclosed FinTech investments for the UK as a whole in H1 2018 totalled £16bn, concentrated largely in London. £201.1m had been invested in FinTech in the north in 2018 to date, but £149m of this had been raised by Atom Bank. Of 19 northern disclosed FinTech fundraises listed by GP Bullhound in 2017-18, only Callcredit was based in the Leeds City Region (Sky Bet was not classed as a FinTech).
- Of the 85 'investor ready' applications for FinTech funding received by NorthInvest since January 2018, 14% were FinTech related. 42% of the FinTech applicants were based in Leeds, with 15% based in London but looking to relocate to the north.
- A common theme in the interviews for this research was an opinion that there is a lack of knowledgeable FinTech investors in Leeds and the north in general. Successful locally based FinTechs would undoubtedly add experience, confidence and capital to the sector (as has been the case in Estonia with Skype).
- The lack of local investment cannot be purely attributed to regionally-based investors, and it was noted in the Capital Pilot study that national Crowdfunding brands Seedrs and Crowdcube were the dominant funders, accounting for 85 of the funding rounds and being focused on the lower end of the market in terms of deal size.
- NorthInvest has had preliminary discussions about forming a FinTech fund for the Northern Powerhouse, to attempt to make FinTech funding more accessible at lower levels of investment, having observed that the criteria of existing funds can be prohibitively complex for FinTech.
- It may also be a key influencing factor that there is a limited understanding of FinTech from many of the advisory firms in the region, which has an impact on the ability to market and attract the right kind of capital.
- A recurring theme from the interviews indicated that it is not apparent to a prospective FinTech investee that there is currently a fund, or investment house, within the Leeds City Region at present that is ideally suited to their typical requirements.

6. There is significant potential and interest for businesses and universities to work together on FinTech related projects, research activities and development of academic courses.

- The key strengths of the Leeds FinTech ecosystem are the Financial Services sector and the universities, which were cited by 38% and 28% of interviewees respectively. This contrasts with only 6% citing quality of life, and 4% indicating that cost was a key strength.
- Leeds City Region hosts the largest higher education cluster outside of London, with nine universities producing 39,000 graduates each year.¹
- The universities in the region include Leeds, Leeds Beckett, York and Bradford, and can be critically important over the coming years if they can generate appropriate skills and capabilities to support the FinTech industry.
- University of Leeds already spins out more listed companies than any other UK university, and the city experiences a “brain gain” with more undergraduates and graduates moving into the city than leaving.
- Leeds could copy other cities such as Boston, USA, where the universities act as extended incubators and provide support to start-ups beyond initial incubation, keeping them ‘in the nest’ as long as possible.
- Nexus, the new innovation hub from the University of Leeds has a great opportunity to connect high growth, technology led businesses to the universities key capabilities and strengths in research and innovation. For FinTech companies, the breadth of research in data analytics and AI will be a strong area of interest and potential collaboration.
- Leeds Beckett University has a network of specialised University Business Centres based across the Leeds City Region (Leeds, Wakefield, Calderdale)², working with a range of public and private partners. The first of its centres, based in Leeds, has provided support to the Leeds City Region for over 15 years and has supported more than 200 new and innovative businesses with plans to grow these numbers to more than 500 in the next 18 months. To date Leeds Beckett University has supported over 850 businesses to accelerate their growth with a 95% business survival rate in the first year of trading.
- Leeds Beckett University also provides digital sector support in its Digital Hub based in the Yorkshire Post’s building, which is home to a number of FinTech start-ups and growth companies.
- York Science Park, within the University of York campus, offers entrepreneurs and start-up business a landing place to build their businesses while maintaining existing academic links.

¹ Investleedscityregion.com (1/10/2018)

² <http://www.leedsbeckett.ac.uk/eiahub/about-us/locations/>

“We recognise the value that can be added through the creative process of universities and businesses coming together to support real and meaningful change. Our University Business Centres around the Leeds City Region offer a focal point for the university to work collaboratively with partners nationally and regionally to support high growth start-ups. We are currently exploring further ways to support the FinTech sector working closely with local FinTech thought leaders and other potential partners with appropriate expertise.”

Simon Baldwin, Fellow of EEUK (Enterprise Educators UK), Head of Research and Enterprise Services, Leeds Beckett University

7. FinTech shares common technologies with other rapidly growing tech sectors, such as HealthTech and Data Analytics. As a result, there are substantial intellectual capital, capabilities and commercial success stories that the region can capitalise on and communicate effectively to potential inward investors.

- FinTech is primarily about technology. The research showed many organisations in the region draw a distinction between the 'Fin' and 'Tech' elements. The 'Fin' element is viewed as mainly focusing on critical but well defined compliance and regulation requirements, while the 'Tech' element is commonly seen as being the most challenging element.
- Innovation in sectors such as HealthTech is looking to overcome very similar issues to FinTech, such as data integrity, data security, compliance & regulation, legacy systems, data silos or end user functionality.
- There have been substantial public investments in technology in the region, including HMRC or NHS Digital who have established major hubs in the city as well as private investments by businesses such as Burberry or Sky Bet.
- The interviews and surveys highlighted the following regional technology and non-Financial Services / FinTech innovation that could have a positive influence and impact on the FinTech ecosystem: Data Analytics (56%), AI and machine learning (40%), cybersecurity (37%), automation & robotics (31%) or blockchain (24%).
- Data and Data Analytics are both seen as key requirements for FinTech and as a key regional capability stretched across higher education and commercial sector organisations alike. Controlling data is a fundamental asset which is critical for Leeds City Region's economy going forward and as such a key focus area for organisations such as TPP, EMIS, William, Hill, Sky Bet, ODI Leeds, Leeds Institute of Data & Analytics (LIDA), which operates the world's leading sports data provider, Opta.
- HealthTech / MedTech presents a very strong base in the Leeds City Region with its own thriving ecosystem, using many of the same underlying technologies as FinTech requires. HealthTech and MedTech also face some of the same challenges that FinTech encounters, not least that they operate in heavily regulated markets.
- AI / machine learning are key trends cited in many surveys, but due to significant research and development across the region's universities and private sector organisations, many respondents rightfully claim that this is a key strength in the region and a logical connection to FinTech. AI and machine learning models are expected to fine-tune and enhance many different Financial Services and FinTech models.
- There are other key tech players and innovation drivers in the region such as Vodafone, aql and Redcentric delivering the region's infrastructure to power FinTech, HealthTech, 5G, IoT and Smart Cities developments.

"FinTech is about 5% Fin, everything else is Tech"

Richard Carter, Managing Director, Equiniti Credit Services

8. There is a bigger prize to be won by unlocking the potential of FinTech capability across the Northern Powerhouse, but to do this requires increased collaboration with other city regions.

- Geographically at the centre of the UK, the Leeds City Region is the largest contributor to UK GDP in the Northern Powerhouse region, which if it was a country would rank as the 9th largest in Europe by GVA (based on World Bank data).
- Few of the interviews conducted referred unprompted to the wider capability of the north, but when prompted there was unanimous consensus that there is significant potential in working across the wider region, if activity can be aligned.
- The individual city regions in the north, most notably those around Leeds, Manchester, Liverpool and Newcastle, have active inward investment programmes in place on a national and international basis, and all have cited FinTech as a growth opportunity.
- The main challenge to combining efforts is that these regions have local objectives and targets, which make collaboration difficult to achieve in practice.
- The universities also operate largely independently, with no current evidence of collaboration in FinTech evident in Leeds, the north or nationally.
- There was a significant development in July 2018 when it was announced the Chairs of each of the 11 Local Enterprise Partnerships (LEPs) in the North of England will sit on a newly formed, Government-funded board called the "NP11". Leeds City Region Enterprise Partnership (LEP) Chair, Roger Marsh, was announced as the first Chair of NP11.
- The recent Convention of the North, which took place in September 2018, recognised the crucial role of business, academia and civil society in driving the future prosperity of the north.

"Regionally and nationally there is huge opportunity. It would be an absolute scandal if the north didn't use the opportunity to build its FinTech presence."

**Alison Port, Director of Strategy,
Leeds Building Society**



KEY RECOMMENDATIONS

A balanced and sustainable ecosystem can be developed via a regional FinTech strategy that attracts and sustains a broad range of FinTech-related organisations. This would range from start-ups to corporates and be supported by a skills strategy to provide tech related capabilities at different education levels. To achieve this, the region needs to address the following recommendations:

1. Match demand-side with supply-side

- In order to ensure the demand-side is adequately matched by supply-side, the Leeds City Region proposition needs to elevate the region as an attractive destination for FinTech inward investment. It can do this by promoting the region's existing strength in Financial Services and specifically the appetite of established organisations in this sector to collaborate with and support FinTech start-ups and scale ups.

2. Enhance the leadership and communication

- Create an executive board / steering group of senior stakeholders across public and private sector, and the universities with a remit to support and grow the FinTech sector in the region, driving increased collaboration and communication.
- Create FinTech collateral to help champion and promote the FinTech sector regionally, nationally and internationally.

3. Develop the ecosystem of start-ups and scale-ups

- Engage with key regional stakeholders to ensure an easy 'landing platform' for start-ups and scale-ups is developed in the region. This could be undertaken as part of the regional FinTech strategy development.
- Develop competitions that focus on regional and / or sector problems that need to be solved and invite start-ups to participate.
- Create a FinTech start-up support programme that outlines the key players in the region and a formula on how to build a successful FinTech.
- Build stronger relationships and alliances with 'virtual' support resources such as sandboxes which already exist on a national and global basis. Examples include the FCA Sandbox and Boston's FinTech Sandbox (which is explained in more detail later in this report).
- This will require financial and other support from the established Financial Services sector, Tech sector organisations and the universities.

4. Create more physical space(s) for FinTech

- Create more physical space(s) for FinTech.
- As part of the proposed comprehensive regional FinTech strategy, undertake regional initiatives to help bring major Financial Services organisations together with FinTechs from within the region, and also to bring start-up and scale-up FinTechs into the region.
- These initiatives should be led by universities and independent third parties to create physical and virtual sandboxes, incubators and accelerators. These innovation hubs could be set up as not-for-profit facilities, so they are not tied to specific Financial Services brands. This needs to be aligned to existing facilities and planned initiatives to maximise reach and attraction.
- Develop relationships with existing FinTech hubs, incubators and accelerators, to encourage them to extend into Leeds City Region.
- Develop partnerships with data and technology providers to make incubators, accelerators and sandboxes an attractive destination for FinTech start-ups and scale-ups.

5. Enhance the links between funders and FinTech innovators

- The availability of FinTech funding options for firms in the Leeds City Region needs to be better communicated, something which can be achieved via a focused programme of events and support collateral. The options do not need to be limited to funders based in the region.
- This programme can be used to target and attract FinTech start-ups and scale-ups from outside the region, via the funding and professional support available within the region.
- To further strengthen this programme, establish a regional not-for-profit finance portal that provides access to regional / national / international investors and finance providers as well as public sector funding providers.
- The creation of a FinTech fund for the north should be supported. Such a fund would provide a tangible target source for equity funding for FinTechs across the north, including Leeds City Region.

6. Develop the links between business and universities

- Business and universities should collaborate on areas of focus which can help build key strengths in the Leeds City Region, including financial inclusion, RegTech, data and analytics, and retail and SME lending.
- Leeds City Region should identify the commonalities between FinTech and HealthTech and focus on the benefits of having core strength in both areas, as this can be a USP compared to other regions.
- Businesses and universities need to maximise the opportunities that publicly funded Knowledge Transfer Partnership (KTP) schemes offer, as these help businesses to innovate and grow by linking them with an academic or research organisation and graduates.

7. Leverage the region's strengths in adjacent tech sectors

- Develop the narrative between FinTech and other tech such as HealthTech, AI, cloud, Smart Cities, 5G, robotics, Data Analytics etc. to demonstrate the wider tech / digital capabilities in the Leeds City Region and the wider collaborative ecosystem which is unique in the UK.

8. Unlock the potential of the Northern Powerhouse

- Leeds should instigate and support a northern focused presence at one or more major international FinTech events, something the CEO of Leeds City Council has already agreed in principle to support.
- As their FinTech activities become more established, the universities across the north should be encouraged to collaborate on FinTech research. Whilst collaboration on specific projects may be challenging to achieve, a showcase of the combined output across the north would be powerful.

Participating organisations

Interviews and surveys were completed by representatives of organisations which included:

SQUIRE
PATTON BOGGS

sky bet

UNISYS

CYBG

Yorkshire Bank
Clydesdale Bank

bolser

Deloitte

TECH
NATION

HM Government

rradar

UOWN

TransUnion

UACCOUNT

NEXUS
UNIVERSITY OF LEEDS

York
Science Park

UNIVERSITY
of York
GRADUATE RESEARCH SCHOOL

udi
Intellectual
Property

Welcom
Digital

sopra steria

e radar.

Tracsis

VOCALINK
mastercard

exa networks
let's keep things simple

ceg

LEEDS
BECKETT
UNIVERSITY

Harrogate
BOROUGH COUNCIL

WOMBLE
BOND
DICKINSON

better
placed
we know people

ReceiptBank

wardhadaway
lawfirm

trunarrative
Exactly who, what and when

first direct bank

trilight

Thompson
BrandPartners

larsongroup

rinfo

NOT JUST AN FD

calls9

Jeremy James & Partners
Making Change Happen.

EY

NORTH
INVEST

whitecap
COMMERCIAL CLARITY

rebuildingsociety.com

PENNINE CLOUD



DACbeachcroft



MakeItYork



CPP Group



EQUINITI



OBJECTIVES AND METHODOLOGY



Objectives & methodology

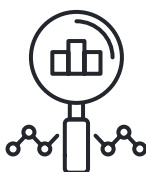
From the outset, the objectives of this report have been to:



Map out the current FinTech activity taking place within the Leeds City Region.



Engage with the key stakeholders in the region to ensure as complete a picture as possible can be established.



Analyse the capability, strengths and weaknesses of the region on a national and international basis.



Understand where the areas of current and potential future competitive advantage lie.



Provide clear recommendations as to how the Leeds City Region can collectively look to develop and capitalise on these areas of competitive advantage.

Our methodology has involved gathering insight and analysis from existing published sources, conducting face-to-face and telephone interviews, and running an online survey. The findings of all of the above have been distilled into this overview report.

FinTech stakeholders consulted

In producing this report, we have consulted and engaged with a wide range of stakeholders across the Leeds City Region:

Private sector

- Banks
- Building societies
- Other Financial Services product providers including mortgage lenders, insurers, asset management firms
- Credit reference agencies and data providers
- Existing FinTech firms
- New FinTechs
- Technology providers
- Supporting services including Professional Services, funders, recruitment agencies, web developers, digital and marketing agencies
- Property owners, managers and tech hub operators
- Operators of key digital and FinTech initiatives (Leeds Digital Festival, FinTech North, NorthInvest)

Public sector

- Leeds City Council
- Leeds City Region LEP
- Department for International Trade
- FCA
- HM Treasury
- Other funding / grants providers

Higher education

- Universities

FinTech - Definitions

FinTech describes a genre, a business or an application that aims to provide Financial Services by making use of software and modern technology.

Organisations involved in FinTech have are using technology to disrupt or enhance Financial Services of all kinds – including money transfer, lending, investing, payments – to better meet the of the tech-savvy and sophisticated customers of today to stay relevant in a world where business and private life become increasingly digitalised. Broadly speaking, FinTech exists anywhere technology is applied in Financial Services or used to help companies manage the financial aspects of their business, including new software and applications, processes and business models.

- **FinTechs** - For the purposes of this report, an organisation involved in 'FinTech' includes the following:
 - A start-up business, including one that is in the pre-funding stage within another corporate entity, a university or an incubator / accelerator.
 - An established start-up that has received funding.
 - A not-for-profit FinTech business.
 - An established business that has built a standalone or an integrated FinTech business.
 - An established business that has acquired a FinTech business.

- An established business that has partnered / collaborated with a FinTech business.
- An established business that has developed / launched a FinTech capability.
- An established business that is applying and shaping FinTech applications.
- **Incubator** – A facility established to nurture young (start-up) firms during their early months or years. It usually provides affordable space, shared offices and services, hand-on management training, marketing support and, often, access to some form of financing.
- **Accelerator** – A fixed-term, cohort-based programme that includes seed investment, connections, mentorship, educational components, public pitch events. Most start-up accelerators are privately funded as an investment fund that takes equity.
- **Sandbox** - A type of software testing environment that enables the isolated execution of software or programs for independent evaluation, monitoring or testing.

"It's fundamental to what we do. We've been involved since before it was called FinTech." **Richard Carter, Managing Director, Equiniti Credit Services**

Measuring FinTech in the Leeds City Region

An estimated 2,600 people work in FinTech in the Leeds City Region. This figure is based on a proxy approach, due to the immeasurable nature of the region's current FinTech economy.

The challenge of measuring FinTech:

One of the biggest challenges of producing this report has been to define and measure the FinTech sector. Not only is it the fusion of the financial and technology sectors, but it also has components that are deployed outside the sector (for example identity verification or Artificial Intelligence). The key challenges with measuring FinTech are:

- FinTech is defined differently by key stakeholders, which can lead to wildly varying opinions. For example, Callcredit employs in excess of 1,000 people in Leeds. Whether someone considers these people work in FinTech or not immediately causes a significant swing in size of the sector.
- Business codes / SIC listings do not cover emerging developments and innovations and there is no code for FinTech.
- Tech specialists can be defined as FinTechs even though they simply apply their tech, such as AI, machine learning or blockchain in Financial Services and FinTech.
- Equally FinTech specialists can be defined as tech specialists as they are seen as neutral providers of technologies such as robo-advice, machine learning or blockchain.

During the course of the research, and even after the data capture phase was concluded, we came across companies who were not known to us. Often, we discovered these firms as they approached FinTech North to find out more about the events programme.

One of our aims with this report was to estimate how many people work in FinTech in the Leeds City Region. Given the above factors, this proved difficult, but we have adopted a proxy methodology which is an accepted approach in this type of research.

Rationale for our calculation of FinTech workers in Leeds City Region:

- A 2015 EY UK FinTech report¹ found that 5% of the Financial Services Sector work in FinTech.
- Our own survey suggested an average FinTech worker proportion of 7.54% in the Leeds City Region, but our sample was focused on people we knew were interested in FinTech so we have used the lower number. As a comparison, London has been estimated to have a 15.2%² penetration of FinTech workers in the Financial Services workforce.
- ONS figures suggest that there are around 52,000³ employees working in Financial Services in Leeds City Region.
- Based on 5% of that population there are 2600 FinTech workers in Leeds City Region.

This calculation assumes that FinTech is a subpopulation of Financial Services (i.e. all FinTech is also Financial Services). In comparison the Report 2018 by Tech Nation found that the digital sector in Leeds is now worth £1bn as growing numbers of start-ups seek to emulate the success of major players including Sky Betting & Gaming and CalLeeds City Regionedit.

The study found that around 168 digital tech businesses were established in Leeds in 2016. A total of 34,742 people are employed in digital tech jobs in the Leeds 'travel-to-work' region, which underlines the sector's significant role in the region's economic growth.

¹. EY 'UK FinTech on the Cutting Edge' 2015

². South Mountain Economics, 2014

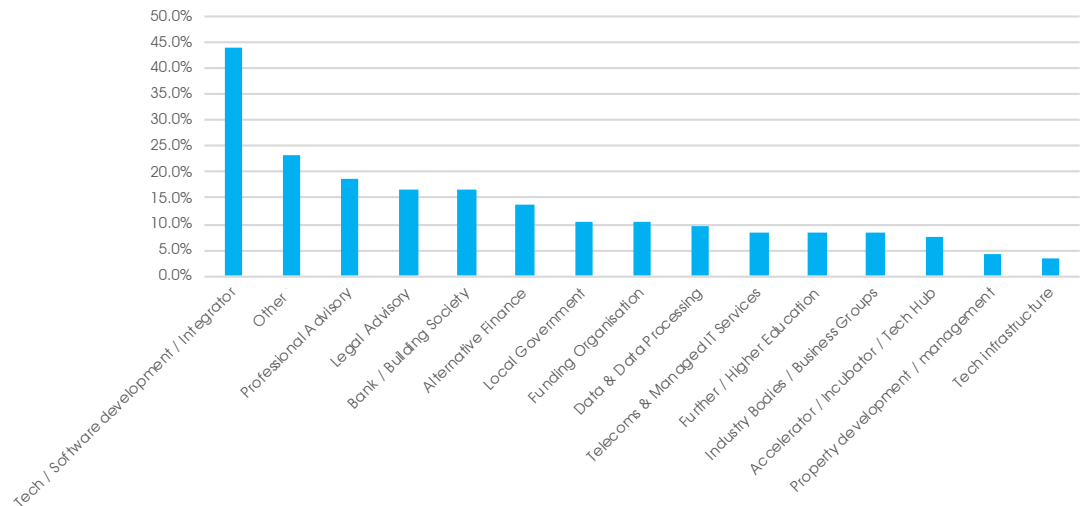
³. Office for National Statistics, 2017: BRES 2017 Survey Data

RESEARCH, CASE STUDIES & BENCHMARKING



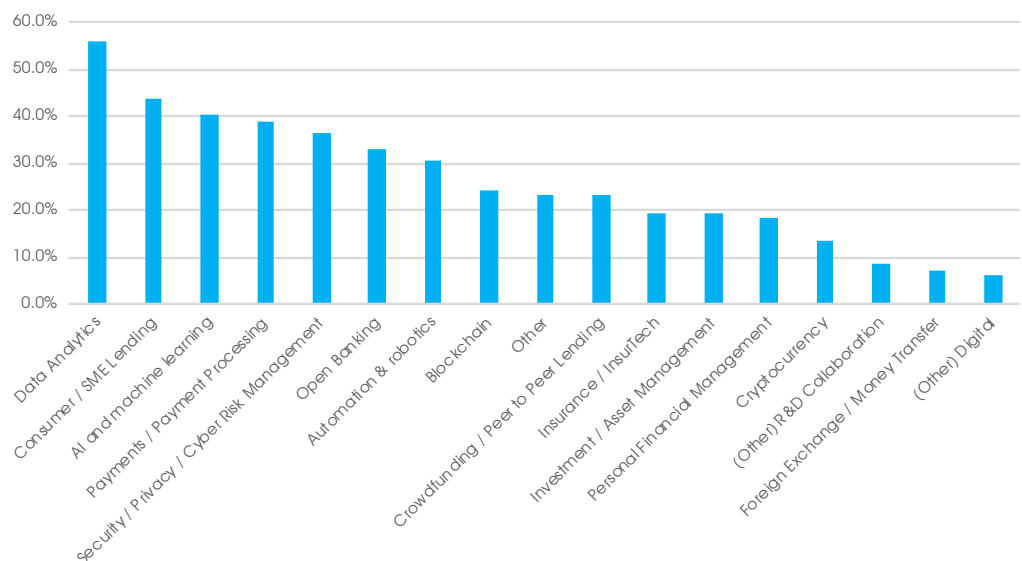
Key Research Findings

The type of participation organisations, representing the FinTech ecosystem:



A relatively small but growing area	41.10%
A significant part of the organisation	28.40%
The majority of the organisation's activities	15.80%
No activity today, but a strong interest to develop this area	14.70%

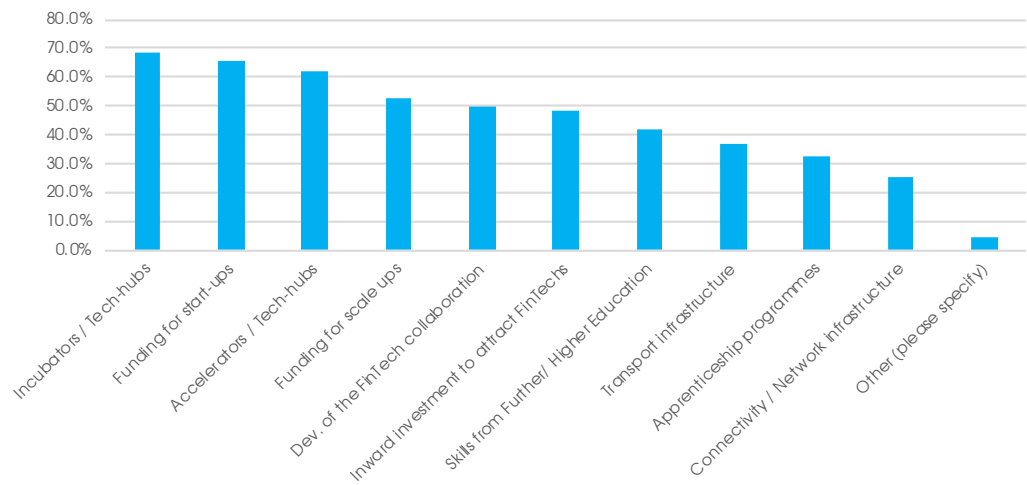
The type of FinTech activity participating organisations undertake



The key parts of the ecosystem that will have the most positive impact on the growth of FinTech in the region over the next 2-3 years

Start-up and Scale-up	75.80%
Funders and investors	66.30%
Technology businesses	62.10%
Corporates and Financial institutions	53.70%
Further & Higher Education	38.90%
Local Government	34.70%
National Government	27.40%
Other (please specify)	5.30%

The aspects of FinTech in the region that require the most attention over the next 2-3 years



Participants come from a broad spectrum of organisations involved in the FinTech ecosystem, with the advisory community leading the way with 31% of participants followed by technology providers / software development / system integrators (28%), alternative finance (13%) and banks (13%), thus reflecting key Leeds City Region sectors such as Financial Services, Professional Services and technology.

The FinTech related activities cover an equally broad spectrum, again aligned to key regional strengths such Data Analytics (34% of organisations are active in this field), closely followed by consumer / SME lending (33%), AI / machine learning (32%), payments (32%), Open Banking (27%), security services (27%) and blockchain (22%).

There is a recognised deep heritage within Financial Services that the region needs to capitalise on and monetise and Leeds City Region presents a skills rich and cost-effective alternative to London.

FinTech is of growing level of importance to the Leeds City Region ecosystem: today 44% of organisations state that FinTech covers significant or major parts of their activities, though by 2020 this is expected to increase to 74% of organisations.

The research also showed that **smaller firms contain a higher proportion of employees actively working on FinTech** - this suggests that smaller firms are more engaged with developments in the sector.

There is a perceived lack of an innovation funnel to help the journey from universities / early stage ideas who can then form FinTech start-ups which progress into suitable incubators, sandboxes, accelerators, mentors, events and collaborations with established Financial Services businesses.

¹ <https://capitalpilot.com/FinTech-market-five-things-learn>

There is a clear recognition of regional tech innovation

other than FinTech that the ecosystem will benefit from incl. AI, blockchain or Data Analytics.

The most positive impact on the growth of FinTech in the region over the next 2-3 years is expected to come from the commercial sector

, incl. start-up and scale-up FinTechs (76%) , funders and investors (66%), tech businesses (62%), corporate and financial institutions (54%), with smaller impacts expected from public sector organisations such as further & higher education (39%), local government (35%) and national government (27%) .

There is a clearly articulated ask from and for **all key regional stakeholders to deliver better publicity outside of the region** coupled with a consistent brand to highlight the attractions of investing in Leeds City Region. Of equal importance is the identification and promotion of a poster boy company to break into the psyche of people as well as the collaboration across the in the wider north to promote the Leeds City Region message.

A common theme in the interviews for this research was an opinion that **there is a lack of knowledgeable FinTech investors in Leeds and the north in general.**

The lack of local investment cannot be purely attributed to regionally-based investors though, and the Capital Pilot study¹ showed that national Crowdfunding brands Seedrs and Crowdcube were the dominant funders, accounting for 85 of the funding rounds and being focused on the lower end of the market in terms of deal size.

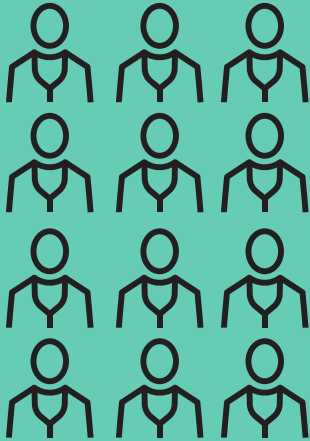
Successful **locally based FinTechs would undoubtedly add experience, confidence and capital to the sector**

(as has been the case in Estonia with Skype or Transferwise).

Skills is a recurring theme across innovation and the north

and equally valid for this study. There is a clear need for graduates to be produced with the right skills and to create new talent and to keep existing skills up-to-date and retrain existing resources.

2,000
attendees



500 from over
companies

speakers
from



23 events
since 2016



Regional Initiatives – FinTech North



FinTech North launched in 2016 as a one-day event during Leeds Digital Festival. Since then the event-based initiative has grown rapidly, forming what is arguably a key focal point for the burgeoning FinTech community across the north. Now regularly attracting over 300 delegates to each conference and up to 100 to each monthly seminar, FinTech North is bringing together the various components of the FinTech ecosystem to engage regularly in discussions, collaborate and share ideas.

The events may have started in Leeds but the organisation, which was incorporated in 2017, has now spread to deliver highly successful and well received conferences in Manchester and Liverpool in 2018. A new chairman has been appointed in Chris Sier, one of five of the Treasury's FinTech Envoys and plans are afoot to deliver events of various sizes across the Northern Powerhouse adding Newcastle, Harrogate, Sheffield and York in the coming 18 months.

Striving to be inclusive and collaborate with the various other stakeholders involved with FinTech across the UK, FinTech North looks to share a breadth of information with its community. FinTech North has stated its objective to support and help grow the FinTech community in the north. Being inclusive, collaborative and neutral means FinTech North is a vehicle to bring together the strengths of the various northern cities and regions in FinTech and Tech in general and foster a community which can develop further as more than the sum of its parts.

FINTECHNORTH

Details about upcoming FinTech North events and programmes can be found here:

www.fintechnorth.uk

"A major influence in why we set up FinTech North was because there was nowhere to go to communicate efficiently with other like-minded people. We knew they existed, but we didn't know where to find them."

Dan Rajkumar, MD
rebuildingsociety.com &
co-founder of FinTech North

Regional Initiatives - Nexus

"I see Nexus changing the mindset and culture in which universities and industry work together, promoting new standards of working and generating economic growth, not just for Leeds but beyond."

Dr Martin Stow,
Nexus Director



Nexus – supporting FinTech growth and opportunity in Leeds

In 2019 the University of Leeds will launch an exciting new hub expected to have a huge impact on the Leeds tech ecosystem.

Based in a brand new £40m building on the University campus, Nexus will provide access to world-leading research, technology and facilities at the University of Leeds. The project features state-of-the-art services including office, lab, collaboration and events space. It is expected to be home to a vibrant and dynamic community of start-ups, SMEs and corporate R&D teams.

The University of Leeds boasts a strong background in commercialisation and focus on collaboration and has a track record of working with the business community. Nexus has been created to build on this success and enable easy access to world-leading academic research with a focus on health, data, environment and engineering sectors.

Nexus intends to change the way that universities and business work together. A team of relationship managers will be solely responsible for facilitating productive working partnerships and collaborations between academic experts and businesses. Having worked in a broad range of sectors their experience includes FinTech and HealthTech and in taking start-ups from proof of concept through to deployment. Alongside these roles, Nexus' onsite business advisor will ensure that investment, talent and academic expertise are combined to produce both business growth and productivity.

The delivery and implementation of Nexus is led by Dr. Martin Stow, whose ambition is to ensure Nexus becomes an innovation powerhouse in the North, bringing together a vibrant community of innovators to deliver commercial impact. As a key contributor to the Leeds Innovation District, Nexus is well placed to support the development and growth of the Leeds FinTech ecosystem.

Nexus has stated its commitment to ensuring the region is an outstanding location for businesses to start-up and grow by offering seamless access to ground breaking research expertise. Through this, it will help industry tackle real-world problems on a varying scale, both regionally and globally.

NEXUS
UNIVERSITY OF LEEDS

To find out more about
collaborating with Nexus,
visit www.nexusleeds.co.uk
or email nexus@leeds.ac.uk

Benchmarking the Leeds City Region FinTech Ecosystem

To provide context for this report, examples have been drawn from three other FinTech ecosystems which hold relevance to the Leeds City Region:

- **Boston, USA** – where universities play a critical role in the FinTech ecosystem, and global collaboration is achieved via a virtual sandbox.
- **Estonia** – a truly digital economy and country, built on the back of brave and successful tech innovation.
- **London** – the leading FinTech centre in the world and focal point of the UK FinTech economy.

Boston, USA

A city where universities play a critical role in the FinTech ecosystem, and global collaboration is achieved via a virtual sandbox.

The Boston innovation and start-up ecosystem is internationally recognised and one of the most advanced globally, a fact FinTech as well as other US and international start-ups and scale-ups benefit from. These are some the cornerstones of this ecosystem:

Funding

The access to capital in Boston is the biggest in the US, as investors are not risk averse and prepared to fail. VCs are looking for investment opportunities with \$3-5m being the minimum, unlike in the UK, where it can be as low as \$200-500, which an US VC would regard as angel investment. In Q1 2018 Boston had more investments than New York and was second only to Silicon Valley, with healthcare & HealthTech attracting the majority of investments.

Incubators & Accelerators

There are start-ups everywhere in Boston and many start-ups spin out from universities and their incubators, as these provide an easy landing spot. The universities are doing most of the incubation and start-ups stay “in the nest” for as long as possible. Once a start-up is ready to leave the incubator there is a large number of accelerators and sandboxes, some of which are not-for-profit, which are great start-up / scale -up facilitators. In addition, most corporates have innovation arms supported by internal VCs, incubators and accelerators.

Example: Mass Challenge Accelerator

This accelerator, that in average accepts only 8% of applicants, is sector agnostic and not for profit, whose sponsors include City of Boston (who provide the building free of charge) or corporates and investors. Mass Challenge runs free of charge 4-months programmes for 128 start-ups at a time, offering sponsors and investors access to a range of high-quality start-ups. Start-ups benefit from access to a large network of mentors, experts and specialists and Mass Challenge runs regular mentor pitching sessions.

Real Estate

The real estate sector has seen substantial federal investment as well as commercial investments fuelled both by the tech boom and the wave of healthcare developments. A further indicative trend is that start-ups and scale-ups and their young entrepreneurial leaders prefer to stay in Boston as there such a diverse environment.

Most businesses emerge from tech hubs and accelerators and don't want a dedicated office but prefer shared space and facilities and the office layout/ design is critical in attracting millennial clients. Hence operators such as WeWork are growing massively in Boston, but own next to no assets and carrying significant liabilities.

Most new building in Cambridge are managed by the Massachusetts Institute of Technology and its innovation labs and there is next to no speculative development as new building being pre-let prior to build. The user is now defining the real estate and office building, which is a trend not unique to Boston but also visible in other cities.

Intellectual capability

The level of talent in Boston is unparalleled, both academic and cultural and in addition to delivering the academic stimulus for start-up activity the 85 higher & further education institutions in Boston also provide commercial innovation and leadership courses.

CASE STUDY – FinTech SANDBOX BOSTON

The Leeds City Region could learn from successful innovation hubs such as the Boston FinTech Sandbox. Within the Boston ecosystem are a number of very successful incubators and accelerators including the Boston based FinTech Sandbox, which achieves global collaboration via a virtual sandbox.

The FinTech Sandbox was



incorporated in 2014, acquired a number of sponsors and data partners (e.g. Fidelity a sponsor, Thomson Reuters as both a financial sponsor and data partners or Barclays Techstars as an accelerator partner) to go live and then launched the model for start-up interaction in 2015.

Being a non-profit is essential as they are unbiased to not favour any supplier. The sandbox runs a continuous programme of start-ups and scale-ups with existing alpha products, who get data access for 6 months. Other key aspects / parameters are as follows:

- Start-ups have to have a commitment to work in Financial Services, but they can work in other sectors as well. Majority come through Google searches for FinTech data and through 18 accelerator partners and their data partners.
- Only accept 25% of start-ups that apply vs for profit who would accept 2-3%.
- Legal partners offering pro-bono advice to start-ups.
- 60% will use the Sandbox provided AWS \$15,000 credits that can be used over 2 years.
- Links to academia are more ad hoc, through MIT have a FinTech lab for student start-ups.
- Institutional partners want to be part of the community and get access to the start-ups.

Goals

- Provide a functional leg-up for FinTech entrepreneurs.
- Foster a GLOBAL collaborative FinTech community.
- Make an enduring impact on state of FinTech data and API access.
- Save a start-up and average \$200,000 in average in costs.

The Offering

- Access to data feeds for development and streamlined licensing process.
- Free compute infrastructure and PaaS.
- Access to network.
- Community events.

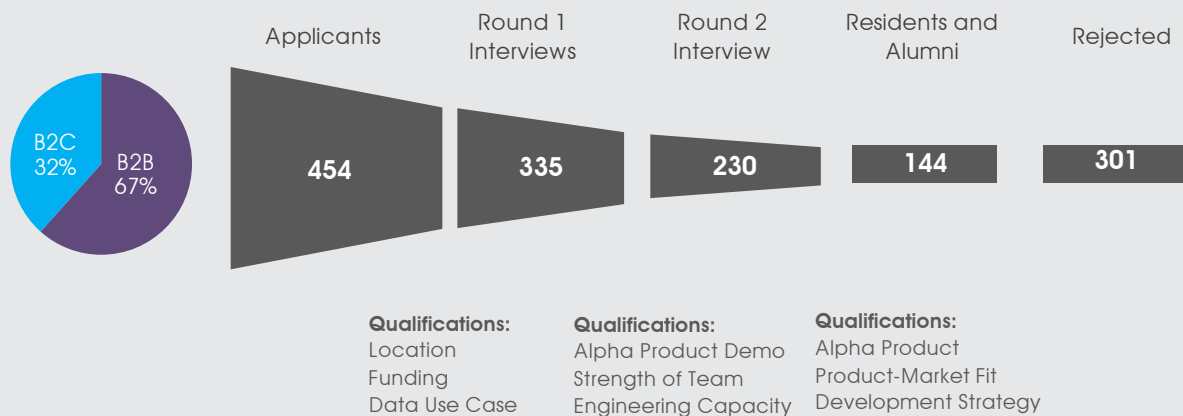
The Ask

Entrepreneurs give back to community:

- Provide feedback to data providers.
- Share and document learnings.
- Contribute non-proprietary code and APIs to GitHub repository.

The Success

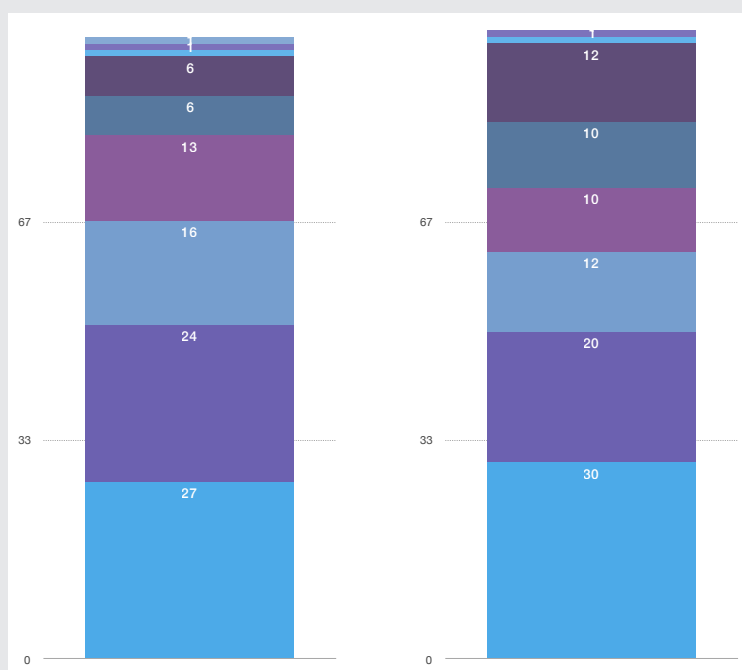
Since its official opening in 2015 FinTech Sandbox Boston has processed over 400 applications from both regional, national and international FinTechs.



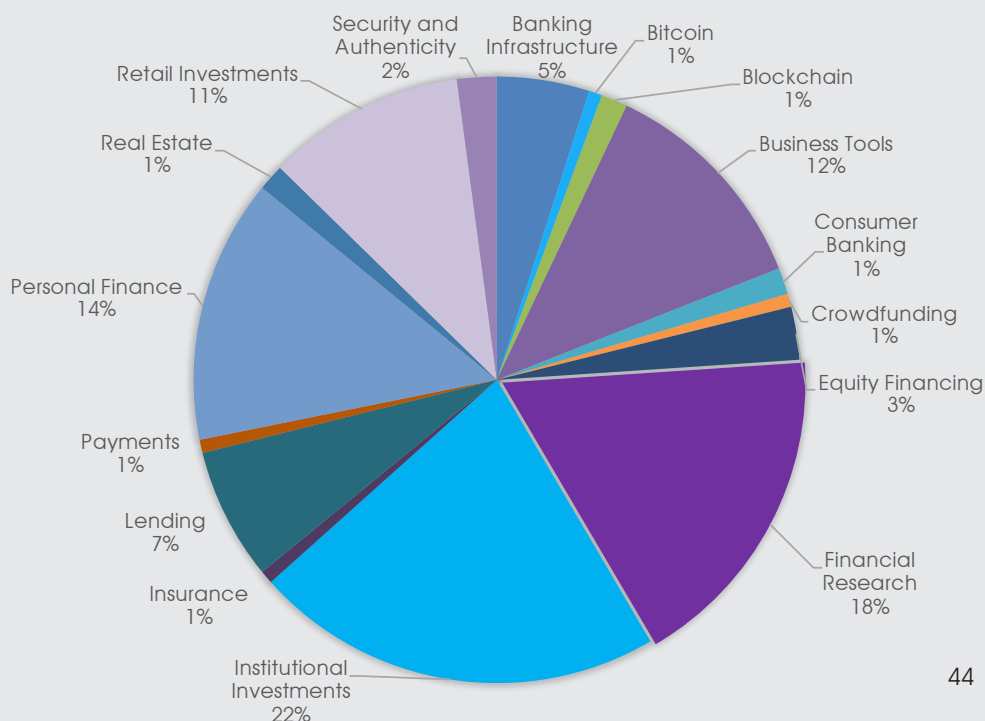
Applicants came from a variety of sub-sectors:

The success is also highlighted by the following key statistics:

METRICS	At Launch	2018
Visibility		
Community Members	50	7,122
Event Attendees		>4,000
Press Mentions	5	133
Events	1	128
Twitter followers	9	2,683
Blog Posts	1	42
Case Studies	1	5
Blog Reads	199	8,455
Start-ups		
Applications	30	454
Residents	5	144
Collisions	10	6,000+



Sandbox start-ups at a glance:





60% satisfaction
vs **25%** global av.

Estonian start-up founders
regarding national
government

Benchmark: Estonia

Another innovation ecosystem that has delivered substantial success stories over the last 10 years is Estonia, a truly digital economy and country built on the back of brave and successful tech innovation.

Estonia, Latvia and Lithuania rank in the top 21 for entrepreneurship in World Bank's "Doing Business 2017" report. Key advantages are: Strong entrepreneurial culture, low taxes, great infrastructure, business friendly law & policies, talent. Being a cultural melting pot with English as a second language means Baltic entrepreneurs embrace the newest trends set in the world's leading tech hubs.

Catalyst

Skype, the world's largest P2P communications platform, is often considered the catalyst of Estonia's emerging start-up ecosystem. Skype's acquisition by eBay for \$2.6 billion in 2005 put the Baltic state on the global map of innovation and fuelled it with financial resources and start-up experience. The FinTech start-up TransferWise, among others, re-confirmed that Estonian start-ups can be globally competitive.

Country & Culture

Estonia despite its small population and due to the high level of technology penetration and technology education, has produced a disproportionately high number of tech start-ups, many of which have created global markets.

The Baltics have also been among the first countries to develop business models based the sharing economy.

The Baltics had to rebuild their financial systems from the ground up, from the Central Banks to retail banks twice, after the separation from the Soviet Union and after the financial crisis of 2008, thus there are no legacy systems.

The market in Estonia (population of 1.3 million people) is not big enough to grow sustainable business and combined with an international mindset drives entrepreneurs from the Baltics to international destinations. For example, the Transferwise founders worked in London and in the US, and speaking 3 languages including English is the norm for young people in the Baltics.

Digital Identity is the main character playing such a huge role in the growth of Estonian start-up ecosystem and the reason for it being called the Digital Republic. Every citizen has a virtual avatar which allows access to banking, healthcare, use of public services, education system and more.

There is a saying that if you launch a garage start-up in Silicon Valley, you have VCs at your doorstep, whereas if you open one in the Baltics you have 6 feet of snow. Baltic businesses have to think beyond their internal markets and aim globally from the start, which is very different for UK or German entrepreneurs who can easily reach a 10 million people market.

Sources:

Crowdfund Insider, 2017: <https://www.crowdfundinsider.com/2017/04/98355-baltic-FinTech-ecosystem-building-unicorns/>
Invest in Estonia, 2016 <https://investinestonia.com/estonia-startup-ecosystem-report-published/>

Ecosystem

The establishment of many private sector accelerator programs and co-working spaces as well as the development of a growing investor community have been crucial in fuelling the ecosystem with know-how and capital. The contribution of Skype alumni is notable, with several early employees becoming angel investors and the co-founders starting an active venture investment group.

Though the total investment in the Baltic countries is comparatively low, and with local funding sources investing comparatively low amounts, the investments per capita are competitive. Estonia, for example, beats out Germany and France.

A growing business angels network is fuelling the Estonian start-up economy, comprising of Estonian angel investors and angel investors from outside Estonia who all heard about the amazing talent and technology coming from Estonia. EstBAN, the Estonian Business Angels Network has 125+ members and already expanding its network into fellow Baltic and Nordic countries.

It is not only the angels community or the talent and start-ups springing up from Estonia but also the level of commitment and support from government and education that is driving the Estonian start-up ecosystem.

The University of Tartu works closely with innovators and organisations driving innovation, keeping up with trends and introducing practical opportunities for students.

FinTech is the strongest tech sector in the Baltic, including payment companies such as Transferwise.

Government

Whether directly or indirectly, the government has been supporting the ecosystem and has helped it gain momentum. Initiatives such as e-government, the digitisation of public agency processes, and e-Residency, offering foreigners a government-issued digital identity and the opportunity to run a trusted company online, have been well-received by the start-up community. The government has also issued P2P lending legislation and offers tax breaks to start-ups that partly subsidise recruitments.

Thus 66% of Estonian start-up founders expressed satisfaction with regards to the national government whereas the global average lies at only 25%.

One of the strong sides of the Baltic states is that governments have issued a form of eased regulations for start-ups, as well as start-up visas to attract foreign talent and investments.

Thus, the government's support in innovation and creating a good environment for innovators to grow, also from regulators perspective, is vital for the Estonian start-up ecosystem.



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Benchmark: London

London is the leading FinTech centre in the world and focal point of the UK FinTech economy, making it a clear benchmark for any aspiring FinTech ecosystem. There are several key characteristics that make the London FinTech and innovation ecosystem such as success story:

The Ecosystem

- London has the world's largest Financial Services sector, supported by a neighbouring booming tech sector.
- The combination of these two neighbouring thriving sectors is something which distinguishes London from the likes of Silicon Valley or Wall Street.
- London also has a unique environment for investment as a result of tax break incentives such as the SEIS, that allow investors to invest £100,000 in a start-up with a 50% tax break.
- London has an enviable and diverse talent pool, with more FinTech workers than New York City or Silicon Valley.
- London is globally-centric and has long been recognised as the world's leading international banking centre because of its concentration of international banks, regulatory environment, location and time zone.
- London's FinTech sector is celebrated as one the UK's biggest success stories, attracting record investment and international admiration, in particular of London's talent pool and the government's regulatory reflexes.
- The maturing of London's FinTech ecosystem is visible not only in venture capital raised – (a record £770m in 2017) – but in London's geography, built environment and real estate market.
- Collaboration between the finance, technology and government sectors as well as between the FinTech start-ups and large financial institutions, in particular, has played a significant role in making this happen. This collaboration is London's FinTech blueprint – it is unique to the UK and has yet to be replicated in other FinTech hubs.

Government

Since 2014, when the Chancellor announced the UK's ambition to be the global capital of FinTech, the Government adjusted its policies to focus on talent, capital, regulatory and tax policy and demand. One of London's greatest strengths is its progressive FinTech regulatory and tax environment. The Financial Control Authority (FCA) combines all the UK's financial regulators into one department. FCA's Project Innovate has been set up to focus on advising and helping FinTechs understand existing and possible future regulations with a regulatory sand box for FinTechs to try out new ideas under close supervision.

The UK adopted the Global Digital Protection Regulation in May '18. Data protection and cybersecurity are top priorities for all UK FinTechs in their new systems development. This is a major advantage for international expansion over US and Chinese FinTechs, which will be constrained by legacy.

Innovative FinTech services are in high demand with UK consumers, financial institutions and corporations in the world's sixth largest economy. Although Brexit has created the uncertainty that traditional financial institutions dislike, UK FinTechs are well-placed to navigate this uncertainty. London will remain the innovation centre of choice for FinTechs with global aspirations. To duplicate the unique London ecosystem elsewhere will be a challenge.

Real Estate

Access to the ecosystem is everything and when it comes to forging partnerships or simply keeping an eye on the competition, proximity matters. There's no single approach as to how this is best achieved.

One option is to open corporate office doors to start-ups, an approach taken by JP Morgan, which can also be a possible solution to grey space or mitigation of headcount reduction. Another is to second corporate innovation teams to co-working hubs in strategic locations – a sort of Trojan horse for tech talent. Proximity is important for start-ups as well as incumbents, particularly for those opting for B2C over B2B.

London can demonstrate some good success stories, particularly when it comes to challenger banks. Acquisition of banking licenses and/or major fundraising success tends to precede relatively rapid headcount growth. Monzo, for example, is set to take on the remaining lease on an office in 38 Finsbury Square. Revolut, initially incubated at Level39, has relocated elsewhere within the Canary Wharf estate to accommodate their rapidly growing headcount.

However, co-working space continues to play an important role for start-ups and scale-ups alike. Of the 29 London-based FinTech companies featured in the 2017

FinTech50, only half have their own office space. The remainder are split 50/50 between co-working spaces, run by operators including WeWork and The Office Group, and dedicated incubators and accelerators.

Culture

Today, despite Brexit, the UK has a broad base of technology, financial and entrepreneurial talent with an estimated 30% of FinTech founders in the UK coming from overseas. In addition, academia, traditional financial institutions and technology companies help to expand this domain experience through government and industry-backed incubators and accelerators.

Professional angel investors, venture capital, private equity, hedge funds, mergers and acquisitions and public offerings provide substantial capital for starting and scaling up FinTechs.

Many changes lie ahead – most notably in the UK's EU exit and ongoing regulatory requirements including Open Banking, PSD2, and GDPR. While the exact impact of current challenges remains to be determined, London's head start in not just adapting to, but leading change in Financial Services places the capital in a strong position.

"If the regions can get their proposition right, then it's a logical decision to not be based in London."

Adam Oldfield, EMEA Financial Services Director, Unisys

"More bang for your buck in the Leeds City Region than anywhere else."

David Aspin, Owner, MunroeK

"The lifeblood of the business."

Sam Davies, Head of Growth, UOWN

"The key thing is how you bring the Fin and Tech together."

Stuart Clarke, Founder, Leeds Digital Festival

"I'm seeing the FinTech propositions maturing."

Richard Sunman, Director Open Banking Solutions, Experian

"Appropriate partnerships with Financial Services Institutions are key to ensuring there is market for the FinTechs' services."

Paolo Zambonini Lowell Group Chief Digital & Innovation Officer

"Investment is shifting from things like payments towards some of the more customer facing segments such as mortgages."

Suzanne Kennaugh, Customer Innovation & FinTech Lead, YBS

"Talent is a key issue – we need to better prepare the students, and better inform the businesses that we have outstanding talent that can meet their needs."

Martin Stow, Director, Nexus

"I'd rather take an apprentice with good skills than a graduate. For future leaders I would look for graduates, but for developers I'd like someone straight from school."

Michael Whitfield, MD, CPP

"One of the biggest challenges we have is ensuring that we bring all of our 2,500 employees on the journey. We know that FinTech will create jobs but it will also change the shape of some of the jobs we have."

Nick Harrison, Commercial Director, First Direct

Whitecap Consulting & FinTech



Whitecap Consulting

Established in 2012, Whitecap Consulting is a regional strategy consultancy headquartered in Leeds, with offices in Manchester, Milton Keynes, Bristol and Newcastle.

Whitecap typically works with boards, executives and investors of predominantly mid-sized organisations with a turnover of c£10m-£300m, helping clients analyse, develop and implement growth strategies.

The firm works with clients across a range of sectors including Financial Services, Technology, Outsourcing, Consumer and Retail, Property, Healthcare, Higher Education and Professional Services, including Corporate Finance and PE.

Over recent years, Whitecap has become increasingly recognised as a specialist in the FinTech market with a range of public and private sector assignments including organising FinTech trade missions for The Department for International Trade into the Northern Powerhouse, working closely with the inward development agencies.

www.whitecapconsulting.co.uk



FinTech North

In 2016, Whitecap co-founded FinTech North in collaboration with White Label Crowdfunding, a Leeds-based FinTech software firm to help promote the growing FinTech activity in the region.

Today, FinTech North, which operates on a not for profit basis, has become firmly established across the North of England, hosting regular events in multiple locations. These attract speakers and attendees across a range of disciplines and interests including policy making, funding, innovation hubs, start-ups and scale-ups through to corporate organisations.

As a result, FinTech North provides a focal point for communication, engagement and collaboration between numerous regional, national and international stakeholders.

www.fintechnorth.uk



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The information contained in this report is of a general nature in relation to the FinTech sector in the Leeds City Region and is not intended to address the circumstances of any particular individual or entity. Appropriate professional advice should be sought before taking action relating to the contents of the report. Whitecap Consulting has endeavoured to provide accurate and timely information but cannot guarantee the accuracy of such information at the date of publishing or in future.

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