







A Snapshot of the Creative Digital Scene in Sheffield

Foreword

This report has been commissioned jointly by the University of Sheffield and Creative Sheffield to sit alongside the three vibrancy reports relating to Sheffield's creative industries published in 2016 and supported by Arts Council England. These reports on Music, Beer and Art provided a snapshot and linked creativity, economic vibrancy and cross cultural collaborations in the three differing sectors, providing areas of growth and development to prioritise over the next five years. It became apparent that the creative digital sector was also a prominent and emergent market where the crossover between sectors was providing fascinating and interesting parallels.

This snapshot of the creative digital scene in Sheffield is equally timely as it sits alongside parallel but overlapping information presented regionally by Tech City UK in the Tech Nation 2017 report and the forthcoming Sheffield City Region Digital Action Plan. However, the focus and indeed the findings contained here demonstrate once again that it is the cultural ecology of the city of makers that determines collaboration and creativity; but like all sectors, requires examination, evidence of growth and strategic questions about where the sector is heading.

We are indebted to the team of creatives who have been commissioned to bring together the evidence in this report and would like to thank Tamar Millen for project management and the author Laura IH Bennett alongside researchers Sheffield Digital, and collaborators Simon Collingwood and Deborah Egan OBE for input and advice as well as the interviewees and respondents to the questionnaires.

We share these findings to show that Sheffield as a City of Makers has the potential, the talent and the creativity to inspire the next generation of creative digital makers. It shows existing routes to markets, areas of growth and potential talent spots for future investors both internally and externally and highlights the wealth of opportunities that are available here.

Once again thank you for being part of this.

Professor Vanessa Toulmin Director of City & Cultural Engagement University of Sheffield



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CREATIVE CITY, DIGITAL CITY

All cities tell their unique stories through their people, buildings, leaders, economic profile and cultural assets.

Sheffield is a self-contained city: connecting with the rural areas and towns that comprise Sheffield City Region, and with a third of the city sitting within the Peak District National Park.

Sheffield is a city of renewal and growth.

Sheffield is well-connected nationally and internationally, through trading, academic and cultural pursuits, yet it has also has a clear independence of thought and action. This backdrop informs the creative digital sector in Sheffield. Like any city, Sheffield is on a journey. This report is the fourth of a series of reports commissioned by the University of Sheffield to highlight our city's cultural vibrancy and creative capability. This report focuses on the wealth of creative digital talent in our city, the many achievements of individuals and companies operating in this sector, and the opportunities for further development and growth. From the sole makers to internationally agile behemoths, the ecosystem is alive and kicking. In this report, we cast a spotlight on the creative digital scene in Sheffield. The report provides illumination but also ideas for how we can continue to nurture this cluster, embracing the many voices that daily drive it forward.

Sheffield is a city of makers. Our creativity sits astride a long run heritage of creating high quality products for national and international markets. Fused with modern techniques, benefitting from commitment from both universities, inspired by the range of festivals and events in the city, and enjoying a spirit of independence, Sheffield is firmly placed as a recognised and respected city with a digital and creative heartbeat.

We are indebted to Laura IH Bennett, who set out the narrative framework, authored the report and conducted the majority of the qualitative interviews. Mel Kanarek and Chris Dymond of Sheffield Digital were instrumental in creating and disseminating the survey, analysing the quantitative data, and helping to establish the parameters and definition of the sector. Simon Collingwood of Quatro PR was an invaluable adviser to the project, providing additional resource for interviews, proofreading and sprinkling glitter on the final text, and amplifying the report locally, nationally, and internationally. A huge number of people from across the city and beyond have been generous with their time and insights without which this report would have been a lesser work.

Sheffield is fashioning new futures through attracting talent to the city, inspiring new thought, renewing its spaces, forging techniques and technologies. It has a cultural and creative vibrancy. Our creative digital sector, in the same way as our sectors in visual art, music, beer, and advanced manufacturing, demonstrates that we truly are a City of Makers.

Thank you for being part of it.



Our Approach

This report provides a snapshot overview of the creative digital scene in Sheffield. Our aim was to draw out the actors and agencies involved in this sector as a starting point to encourage further engagement. To achieve this, we undertook a significant amount of qualitative research, interrogated survey data, carried out statistical analysis and conducted structured interviews with a variety of key players across the city. Our objective was to provide a textured illumination of the creative digital economy, built on the stories from the ecosystem and a data-led analysis of the sector. This report cannot claim to adequately convey the depth, breadth and the vibrancy of the creative digital industries in Sheffield and the wider region; this is a sector that is ever growing and always developing further opportunities.

Drawing boundaries around the sector is challenging. "Creative Digital" can mean many different things to many different people.

The Department for Culture, Media and Sport (DCMS) defines the "creative industries" as consisting of 13 categories: advertising, architecture, publishing, radio and TV, design, film, music, software and computer services, computer games, designer fashion, crafts, performing arts, and the arts and antiques market.

Tech Nation, the UK's foremost report on the digital tech sector, uses the following 16 categories to define "digital tech": app & software development, data management & analytics, digital advertising & marketing, digital entertainment, enterprise software & cloud computing, internet of things/connected devices, cyber security, e-commerce, edtech, fintech, games, hardware & devices/open source hardware, healthtech, online gambling, social networks, telecommunications & networking. For this report, the creative digital scene is defined as the intersection between the broader "creative" and "digital tech" sectors. It's a vibrant intersection, with an impressive and longstanding heritage across the UK which is mirrored in Sheffield. Within the five areas we have identified (Digital Design & Development Agencies, Video Games Makers, Digital Art & Culture, Digital Media & Content, and Digital Making) there is overlap across diverse specialisms and collaborations that in some cases have led to the genesis of new companies.

Of course, there are no clear lines of division between these five areas; there is overlap between them and many of the companies and individuals that we spoke to or surveyed fit into two or more categories.

> Digital companies in Sheffield boast one of the highest growth rates of any cluster in the UK, with turnover increasing at 47%.

SHEFFIELD'S CREATIVE DIGITAL SECTOR

Taking the intersection between the "creative" and "digital tech" sectors as our starting point begs a treatment of the parent sectors.

Digital employment in Sheffield and South Yorkshire stands at well over 21,000.

Sheffield's Creative Sector

Statistics from the Department for Culture, Media and Sport (DCMS) show that the Gross Value Added (GVA) of the Creative Industries in the UK in 2014 was £81.4 billion and, in 2015, they accounted for 1.9 million jobs¹.

Many of the success stories and elements that make up the creative side of Sheffield are captured in the "Art" and "Music" reports. Both reports showed that art and music in Sheffield contribute significantly to Sheffield's vibrancy and economy, as well as providing an attractive cultural offer for locals and visitors alike. Sheffield has 19 studio groups providing 362 artists with studios, and 70 rehearsal rooms providing space for over 450 active bands. The Millennium Gallery is the most visited free attraction in the North of England, with twice the number of visitors as Yorkshire Sculpture Park. Established in 2002, Warp Films is the production company behind several BAFTA winners, including "This Is England 88".

The arts and music sectors are similarly characterised by a preponderance of individuals and small independent organisations working across the city, scattered but often collaborating, with a DIY feel and a high degree of creativity and innovation. The artist community is perceived to be tightknit, self-reliant, and resilient. Likewise, Sheffield's music makers comprise a community characterised by shared interests, mutual support and a sense of heritage. After the **"Software & Digital"** sector, **"Music and Performing Arts"** is the sector in Sheffield with the highest number of businesses².

New materials, analysis, collaboration and cross-disciplinary practice are key to the city's creative digital industry and to the formation of the assets required to trade in a global economy. Today, in order to maximise audience reach, all creative disciplines need to create accessible and far-reaching digital assets, bonding creative content with digital distribution. Creative industries must embrace live coding, streaming, podcasting and other means of telling stories in a digital age. Abdullah Al- Walli of Connect the Dots and Bad Taste Records, encapsulates this: "Our ever-changing digital landscape requires all creative businesses to adapt their strategy and marketing to be continually reactive to global trends. The most convenient way to consume music over the last decade now also applies to gaming, film and digital arts, and we're now seeing streaming on subscription-based digital platforms accelerate quicker than any other format. Recognising these trends early gives agile creative SMEs an opportunity to react quicker and therefore gain some advantage over their larger corporate counterparts."

In Sheffield, we see a creative and cultural landscape driven by a vibrant grassroots movement where fresh approaches, fostered by a long list of dynamic partnerships, have come together to create new assets. This ranges from Alex McLean's innovative TidalCycles (programming language for live coding) to Sheffield's thriving podcasting movement, with 45 podcast stations ranging from football and fatherhood to international documentary making. Increasingly, podcasting is seen as an essential alternative to linear transmission for sponsors and advertisers; for instance, Sheffield's DocFest sees the podcast as a key tool in meeting the ambitions of its investors. Sheffield's rich cultural and creative fabric is backed by assets such as the festivals and physical spaces where new work is cherished and promoted. Festival programming in Sheffield is ideas-led and reflects the city's creative range, fusing science, tech, electronica, film, music and performance. Festival of the Mind, DocFest, Connect the Dots, Algomech, No Bounds and Sensoria all perfectly illustrate contemporary cross-disciplinary content and play a key role in forging Sheffield's external profile and stimulating its visitor economy.

The DIY ethos is strong in the city and a significant number of the city's most interesting cultural offerings started as small grassroots organisations; for instance Yellow Arch Studios, Site Gallery, charitable ticket agency Party For The People and Tramlines. This activity continues with venues like The Audacious Art Experiment, DINA, The Viewing Room and Abbeydale Picture House, providing the next generation with opportunities for platforming new work and championing cross-disciplinary practice. Recent developments in the creative industries sector in Sheffield include the creation of two networking / promotion bodies. The Sheffield Cultural Consortium, set up in 2011, provides networking and advocacy opportunities at a CEO level for institutions across the cultural space. At a grassroots community level, the Sheffield Creative Guild, established in 2015, provides networking opportunities and a platform for collaboration for individual freelancers and small businesses operating across the entire spectrum of creative. Taken together, these serve as entry points into the sector, expressions of creative endeavour and locations of collaboration.

Sheffield's Digital Sector

Sheffield has an ambitious and ever-expanding digital tech sector. In September 2016, it was reported that there are 5,495 technology companies across the Sheffield City Region, the largest 25 of which have a combined turnover of just under £2b, employing 12,657 people³.

The fast-paced growth and increasing importance of the digital tech sector in Sheffield mirrors what is happening nationwide. In 2015, the birth rate of digital tech businesses in the UK was 15.2%. By comparison, the birth rate for other businesses across the wider economy was 11.6%. Across the UK, between 2011 and 2015, the growth rate of digital jobs was 17%, which is more than double that of non-digital jobs at 8%, and in 2015 the economic output of the digital tech industry in the UK was almost £100bn, growing by over 10% from 2014–2015. 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 \pm 50,000).⁴

Sheffield & Rotherham was identified in the Tech Nation 2017 report as one of seven "**tech clusters**" in the North of England. In Sheffield, the increase in number of digital tech businesses from 2011 to 2015 was 27%, and there were over 160 digital tech businesses formed in 2015 alone. The average number of new digital tech companies formed each year in the city (2011 –2015) is $173.^{5}$

Overall, the digital tech sector in Sheffield is varied and pushing down boundaries, with some large home-grown technology firms such as PlusNet (Turnover: £267m); Insight Direct (Turnover: £438m); and Servelec (Turnover £63.1m)⁶. There is also significant presence from a number of international tech firms, such as ARM, who manufacture semiconductors and who employ 60 people in Sheffield; Autodesk, the American multinational software corporation that makes software across wide range of industries; and Ansys, a computer-aided engineering software development firm.

Sheffield's digital tech scene is characterised by large ambition, with a home-grown feel and a tightknit and supportive community. Tech startup founders include Sheffield locals, graduates of the city's universities, and people from elsewhere in the UK and the world who have chosen to make Sheffield their home. Receptive is a ground-breaking Software-as-a-Service tool used by software companies the world over. Airstoc, who raised just under half a million in 2014, provides a platform for drone operators to showcase their work and find new clients. Tutora provides an online platform to help students find trusted tutors. In March 2017, they successfully raised their second round via CrowdCube, considerably exceeding their target of £350,000. IN-PART raised their first round in 2016 and employ 14 people in the city.

Used by universities in the UK, the US and Canada, and large multinational corporates, IN-PART facilitate the commercialisation of new technologies emerging from universities. Twile, now employing 6 people, got their first break as part of Dotforge Accelerator, based in Sheffield. From humble beginnings, they went on to raise just under half a million and are now gearing up for a Series A round. WANdisco boasts dual headquarters in Sheffield and in San Ramon, California, and is an internationally recognised brand, with products that are used the world over. The Floow employs 75 people worldwide, 60 of whom are based in The Floow's offices in Sheffield's Kelham Island, and in March 2017 they announced a £13m investment from a range of world-leading global partners. The University of Sheffield is a significant minority shareholder of the company and two of its four cofounders are University of Sheffield alumni.

Sheffield: Creative City, Digital City

The creative digital scene in the city has a long history. A 2010 report commissioned by Sheffield City Council's economic development arm, Creative Sheffield, found that the creative digital sector makes "a significant contribution to the local economy".⁷ Figures from this same report cite the existence of 2,200 creative digital companies in Sheffield, employing over 10,000 people, and with a turnover of £1.1 billion.

The sub-sectors of hardware, software and gaming at the more "digital" end of the spectrum, were found to be the principal economic drivers within the creative digital sector. But the report also notes the significant social impacts and indirect economic impacts of firms at the more "creative" end of the spectrum, in making Sheffield a vibrant and attractive place to live and visit.

We are a city of entrepreneurs and creators, forged in the mould of our forebears, where we use our natural resources to our advantage and add our own particular Sheffield flavour to the national mix. In the past they were iron ore and coal. In today's economy, our natural resources are raw ideas, an entrepreneurial spirit, our local talent and our sense of community.

Sheffield has a culture geared towards generosity and collaboration. Across the creative digital sector, people are willing to contribute their time, energy and knowledge to support up-and-coming entrepreneurs and independent businesses, whether digital, creative or both. It is often said that Sheffield is a village. The "two degrees of separation in Sheffield" factor means that the creative digital sector is incredibly easy to access. Introductions are readily made and there is a plethora of meetups and events. The sector warmly embraces newcomers to the city, bringing with them as they do a whole raft of new ideas and insights from other cities and countries.

Through the research and writing of this report, we discovered that the creative digital sector remains a powerful driver for economic growth and cultural vibrancy in our city.

SHEFFIELD: IN THEIR WORDS

When we asked our interviewees how they would characterise the creative digital sector in Sheffield, similar themes consistently arose. Heritage and authenticity; connections and willingness to collaborate; a tendency to "just get on with the job" and undersell our achievements. A fierce independence runs through the entrepreneurs and individuals working in the digital creative sector, alongside immense pride in the high quality of the work produced.

Alex McLean of AlgoMech Festival:

"You can't talk about Sheffield's identity without talking about the many festivals here. There is a lot of space to experiment, plenty of opportunities to collaborate and people are very supportive of new and innovative ideas.....The universities are really involved in local culture, which I don't think you get to the same extent anywhere else."

Lee Mullin of Autodesk:

"Sheffield is a creative city with a vibrant music, art, and film communities. It has a strong community based culture. It is well interconnected and has a good network of people and companies. It's a great place to live."

Deborah Egan, Director of DINA and SONA:

"One of Sheffield's greatest assets is that creatives in the city will work proactively in partnership to ensure that the sector thrives and remains progressive. Emergent technologies, such as TidalCycles, have inspired new ways of performing. Global distribution from small Sheffield-based companies, such as Off Me Nut and Bad Taste Records, embraced multi-platform distribution for physical and digital artefacts. Sheffield's DIY and "pro-risk" ethic runs strong in the genes and has created a rich ferment of new work, venues and festivals, wholeheartedly supported by both universities, and giving Sheffield the edge in a global economy."

Nick Bax of Human:

"We are based in Sheffield in because it's where we're from and because it's affordable. The affordability of Sheffield means that we can be selective about the work we take on; if we had to pay Hoxton rents we would have to take on anything and everything. We have more room to breathe and develop in Sheffield; there's a community of people who have been working in this sector for a long time, so you also have that heritage. Sheffield is a strong and unique brew; we provide <u>something totally</u> unique here."

Pam Bowman of SIA Gallery at Sheffield Hallam University: "Sheffield is understated and egoless but incredible diverse. People just get on with things, they don't shout about it, they just do it."

Abdullah Al–Walli of Connect the Dots:

"Sheffield is home to a vast array of talented creative freelancers, CICs, SMEs and multi-disciplined artists that need to be nurtured through mentoring, with access to technology, affordable rates and the infrastructure that will allow them to thrive. Sheffield offers this with its growing range of DIY spaces like Hybrid Studios, DINA and The Audacious Art Experiment."



Laura Sillars of Site Gallery:

"Creative digital companies need a fine balance of head space to dream things; enough skills and people to inspire them, motivate them, partner with them; and enough access to a wider market. Sheffield is pretty well placed with all of those elements and has aspirations to be even greater."

Gavin Shore of Jaywing:

"People who consciously decide to make Sheffield their home are typically interesting people, with a strong story. Sheffield is entering a new chapter. The industry itself is going through so much change and new areas of the city such as Kelham Island are soaring in popularity."

Adam Willerton of Spotted Digital:

"Our company is built around enthusiastic, young employees who are able to thrive in an affordable, culturally rich city such as Sheffield."

Amy Beeston of SONA - Women's Sound Network:

"Sheffield is a remarkable place where new relationships are created and ideas explored. SONA (Sound Natives) emerged from the Connect the Dots platform and is now in the process of becoming a CIC determined to provide tech and music opportunities for women and girls. With over 500 women and girls attending our workshop series in late 2016, Sheffield's can-do culture has allowed us to develop and nurture this important strand of music education and we are looking forward to the next stage of our development."

Emma Cooper of Pimoroni:

"It's where we live, with a wonderful lifestyle, cheap running costs, supportive community, beer, culture. Sheffield is well connected, friendly and laid back, there is an established DIY culture, people just get on with it. There are low running costs compared to London and two excellent universities which are developing an excellent skills pipeline. Substantial businesses, either underpinned by digital thinking or transformed by digital, have been developed in and flourish from the city."

Anna Bollinger of Appt:

"The cost of living and therefore developer wages etc. is far lower in the North than the South. This enables us to produce the same quality of work at a competitive rate. There is also an incredibly supportive, collaborative and socially conscious community of digitally minded individuals in Sheffield. By working together, this community is able to generate truly innovative solutions and help fledgling companies get started."

Suzanne Bell of Ledgard Jepson:

"The city has a huge amount of raw to experienced talent which flies under the radar. There are some great creative digital companies compared to other more well known cities noted for their creative sites." Sheffield-based record label Computer Club and code-based musician Alex McLean collaborated to produce an album on a Raspberry Pi Zero.





SHEFFIELD: A MAGNET CITY

Sheffield has a magnetism. In early 2017, Perkbox and McLaren Automotive established footholds in Sheffield City Region, wishing to benefit from and participate in an ecosystem that is innovative, creative and rich in talent. These companies will further renew, strengthen and serve to attract additional investment into Sheffield.

Sheffield, like many cities, has seen significant renewal over recent years. It has changed almost beyond recognition in the past three decades; we are on a journey towards reinvention, without losing sight of our heritage or what makes us unique.

The creative digital sector of Sheffield today is characterised by a renewed sense of pride in our city's cultural and creative offering; an engaged and active grassroots community who run meetups and who are constantly striving for collaborations; and a more tech-savvy population who are aware of the potential of digital.

To build a picture of a changing sector in a dynamic city, it is necessary to have a frame of reference to provide context. KPMG's "Magnet Cities" report (2014) provides the most comprehensive and robust framework to showcase Sheffield's strengths and draw out some key recommendations.

The Magnet Cities report examined how cities can "flip the magnetic switch" to draw people, businesses and tourists to them. KPMG studied nine cities around the world, all of which successfully managed to flip that switch, and found that all nine cities went through an almost identical process of renewal, despite not being in contact.

The process undertaken by civic and community leaders to flip that magnetic switch followed these four steps:

- Focus on their existing residents' needs and uses of the city, as well as their frustrations;
- Invest heavily in physical renewal through the creation of entirely new districts and the creation of new through-flow;
- Improve the quality of life by ensuring that there are interesting things for people to do and fascinating places to visit; and finally,
- Consider the commercial aspects and make sure that the city is good for current businesses as well as attractive to prospective businesses.

In this report, and through the lens of the creative digital industries, we conclude that Sheffield has many of the elements that constitute a "magnetic city" and make some recommendations as to how we might further build upon those advances. We have taken the seven principles of Magnet Cities, and have mapped the creative digital scene against them to assess how far Sheffield has advanced along the path towards becoming a magnet city. We demonstrate how Sheffield is reinventing its identity in a way that is consistent with its past, but that ushers in a new future.

So then, what are the seven principles of a magnet city? And how does Sheffield's creative digital scene fit into that?

Magnet cities attract young wealth creators
Magnet cities undergo constant physical renewal
Magnet cities have a definable city identity
Magnet cities are connected to other cities

Magnet cities cultivate new ideas
Magnet cities are fundraisers
Magnet cities have strong leaders

We are a city in transition: trying out new identities and seeing what sticks, full of creative and ambitious people who are passionate about improving our city, against a backdrop of significant transformation in our infrastructure and public spaces. We are the North's best kept secret, but that belies an impatience to get the word out about the opportunities and ambition of Sheffield and the people who choose to make it their home.

> The picture that emerges is a city on the cusp of something big. It's an exciting time to be in Sheffield.

Attracting young wealth creators

Sheffield is a city of diversity. The city's economy has proven to be resilient and has grown over the last decade on the back of strong liveability scores and a good employment record. Sheffield is an attractive city to be part of, and has benefitted from an inflow of skilled wealth creators. There are a number of factors to this. The 2017 State of Sheffield report noted that "there are high rates of 16 and 17 year olds engaging in education or training and successful apprenticeships programmes", and that "sectors such as the advanced manufacturing and creative and digital industries are growing, providing more opportunities for young people to live and work in Sheffield"⁸.

Sheffield is home to two large world-class universities with a student body of approximately 60,000 undergraduate and postgraduate students, representing some 15% of the city's population. This provides significant benefits to Sheffield and the wider City Region, and indeed the visibility of both universities is enhanced by their city centre locations. The Universities have in recent years transformed the city centre landscape through enhancements to their estates and wider communities.

Both universities are a training ground for young talent, a high proportion of whom continue to have a strongly favourable view of the city. Moreover, and specifically relevant to this report, both universities have strong departments in Design (Hallam), Games Development (Hallam), Engineering (University of Sheffield), as well as dedicated extra-curricular support for enterprise and entrepreneurship in The Hatchery (Hallam) and the Enterprise Zone (University of Sheffield). Both universities play a full role in the cultural, civic, economic and creative life of the city, and there is no sense in Sheffield of a separation between "town and gown" as there is in other cities.

Lee Mullin of Autodesk:

"The high level of students who are active in the city, and those who stay beyond graduation, combine to provide a rich seam of talent for the city."

Autodesk is a global leader in 3D design, engineering and entertainment software. Headquartered in California, it has 30 people in its Sheffield office working across a global spread of built environment projects. The Sheffield team is mostly made up of residents of the city, many of whom moved to Sheffield to work with Autodesk.

Stuart Green at Zoo Digital:

"Having access to the huge body of students and graduates in Sheffield is a big plus. A number of our staff are graduates from the universities here, and we also take on a lot of temporary staff, especially international students based in Sheffield, so we have a pool of native speakers of other languages who are based locally. This enables us to make content available in countries around the world, working with clients such as Netflix, Hulu, and Amazon."

Carrie Fletcher at Finger Industries:

"It's an entrepreneurial hub with a growing community of creators and talent, so there is already an established network that is constantly being built upon. We also have great beer, gin and local breweries, which also helps." "Four out of our 12 employees are from Sheffield, the others have either returned to Sheffield or have moved here for the first time. It's attributable in part to the quality and breadth of projects that we undertake at Joi Polloi, but also because people are attracted to the idea of living in **Sheffield with its** close proximity to the Peak District."

Andy Barratt, founder of Joi Polloi



Steel Minions, the commercial games development company at Sheffield Hallam University, boast the largest Sony PlayStation 4 teaching lab in the world. They were the first university in the world to release their own PlayStation 4 game, PieceFall, released in 2012.

tion.First

The creative digital companies in Sheffield play a significant role in attracting young wealth creators to our city, and Sheffield itself is a magnet for people, due in no small part to its creative and cultural offering. Hugh Mann Adamson, founder of LTBL Productions, started his company in 2012, but it only really started to grow once he moved to Sheffield in 2014. "Business has increased exponentially; being in this city has really helped us to win local and regional clients and take on new and exciting projects."

The rich creative pulse is reflected in the variety of cultural, creative and world class festivals that take place in the city. **DocFest, Tramlines, Festival of the Mind, Sensoria, the Children's Media Conference, Design Week**, and many more, serve as entertainment and critically draw in young talented audiences to Sheffield. Alex McLean is the co-founder of **Algorave**, an international movement of code-based live music performances across 40 different cities. In 2016, he put on the city's first **AlgoMech festival**, linking digital arts with mechanical movement. The reason Alex moved to Sheffield was in part due to the existence of **LoveBytes**, an Arts Council national portfolio organisation who had a 20-year history of running an annual digital arts festival in Sheffield.

Skills progression is a critical part of the story and provides the fertile soil for the future growth. Sheffield's creative digital sector provides opportunities for progression for the young wealth creators it attracts. Amongst the individuals we interviewed, a recurring theme was the high degree of companies spawning new startups, as well as horizontal moves between organisations. This takes place in a collaborative and encouraging environment - not a competitive "dog-eat-dog" manner - with individuals and companies continuing to work together on projects. Nick Bax, founder of Human Studio, was a Director at The Designers Republic for 15 years before seeing an opportunity to set up his own studio in 2007: "At that time we were able to bounce back relatively easily." Matt Pyke joined The Designers Republic as a graphic designer when he graduated from university and then, similarly to Nick, left and went on to establish Universal Everything in 2004. Matt says, "It was good timing, as broadband was getting quicker

collaborations easier. I had an interest in taking my skills in graphic design, honed at The Designers Republic, and moving into animation."

This movement is prevalent too in the games industry. Talk about games to anyone in Sheffield and you will hear about Sumo Digital and Gremlin Interactive. The former is a large games development company based in Sheffield that employs 350 people and produces games for all the major brands including XBox, Nintendo and PlayStation. The latter is where it all began for the games industry in Sheffield, back in 1984, with a small video games shop on Carver Street, founded by Ian Stewart. When Ian formed the software development arm of Gremlin, a lot of the early customers became their first employees. Gremlin became one of the big players in the UK for games development. As a fully integrated company, they not only designed and developed the games, but published and marketed them too. When Gremlin was bought out by Infogrames in 1999, a lot of the original Gremlin team went on to found their own games companies, including the aforementioned Sumo Digital. Sumo Digital itself has spawned other companies, such **Dumpling Design**, founded by Travis Ryan who was part of the very early team at Sumo. Dumpling Design has a core team of just three people, but they punch above their weight, releasing games such as Dashy Crashy on iOS, which has over 2.5 million downloads and was named Game of the Week by the Guardian and by Apple.

Skillsets acquired at Gremlin did not stay merely within the games development sector. Another "ex-Gremlin", Paul Beech, went on to found Pimoroni, a design / making / educational company based in Sheffield who "make tech treasure for tinkerers", most notably the Pibow case for micro-computer Raspberry Pi. Skills learnt at Gremlin and Sumo have also now made their way back into education. Jacob Hapgood, previously at Sumo, now heads up Sheffield Hallam University's Games Design & Development course. Jacob cites this movement within the industry as a real advantage for Sheffield: "There are people at Sumo who have got 20+ years' experience. Those decades of experience and the movement of people in the city within the industry are both huge assets for Sheffield. The games industry can be a turbulent place and places like Sumo, and before that Gremlin, have provided consistency for the job market and opportunities for education and career progression."



Sheffield is an attractive proposition for young wealth creators. It is an affordable city to live and work in, with a wide variety of creative and cultural offerings that keep it interesting and vibrant. A strong creative digital sector, providing opportunities for employment, also has secondary social benefits in that it spawns new ideas and attracts interesting people, making the city a more attractive place to live for highly skilled workers in other sectors.

Pimoroni

#425 fastest growing company in Europe #50 in manufacturing #30 in the UK #2 in manufacturing in the UK "We started on the outskirts with tinpot rents. We're now in the city centre and it's not difficult to meet the rent. **Facilities like the** Workstation are also key in bringing people together in an affordable office space. This affordability means that as a creative digital company, you can establish yourself quite easily."

Jonny Briggs, Field Design.

Physical renewal

Investment in new buildings is essential in order to provide grow-on space for ambitious companies who look to provide the modern and flexible work environment expected by today's workforce. In recent years a significant amount of physical renewal of public spaces and buildings in Sheffield has taken place, with strategic developments across the city centre and proximate areas such as Kelham Island, West Bar and the Cultural Industries Quarter.

Capitalising on its unique industrial heritage city centre fabric, Sheffield has seen significant and varied development, with an array of award-winning public developments, commercial office buildings and repurposed old manufacturing facilities. This has been driven by the private sector, both Universities, and Sheffield City Council. A key part of Sheffield's physical identity is based on the attractive and well-regarded public realm throughout the city centre. Over the next few years, the **"Knowledge Gateway"** running through the city will be considerably improved and expanded, thanks to significant investment from Sheffield City Council and the private sector. The Knowledge Gateway will provide potential development sites, a more attractive environment, and will improve links between key destinations in the city.

The opportunities for space in Sheffield are varied, ranging from premium commercial space to the adopted refurbishment of older heritage places, to new purpose-built places in previous industrial premises. Sheffield has seen the opening up of significant commercial spaces that have been either designed specifically for creative & digital firms, or simply adopted by companies in this field. Spaces such as **Harland Works, Globe Works, the Workstation, Electric Works, Krynkl, Little Kelham and Park Hill,** amongst a range of others, have provided a range of property options for growing businesses of various sizes and budgets. Coming in 2017, **the Kollider project** will provide muchneeded co-working space for digital tech startups and SMEs in the emergent Castlegate area of the city.

For the creative digital sector, demand for office space has increased year on year for the last five years, and accounts for nearly a fifth of commercial space take up⁹.

Recent examples include Sheffield's "Digital Campus" which offers flexible Grade A office space in the city, right by the train station, and within a 10 minute drive of the M1 motorway. Electric Works, one of three buildings that make up the Digital Campus, houses Tech Dept, Sky Betting and Gaming and WANdisco. Another city centre commercial development is City Gate. Zoo Digital, who moved there in late 2016, cited the need for a space that they could customise to their needs. At their new office, they have been able to expand their capability in video editing by kitting out and soundproofing rooms for that specific purpose. According to CEO Stuart Green, the new space has also enabled them to provide new facilities that are attractive to prospective hires.

Sheffield has a stock of good quality previously industrial buildings in and around the city centre that are now being repurposed for a new economy and a modern workforce. Workshops that once housed **"little mesters**" manufacturing cutlery have been reimagined for today's creative digital industry. **The Kelham Island Quarter** is being touted by some as the **"Shoreditch of Sheffield"**; it certainly has the rough and ready feel of Shoreditch in 2010, attractive to a young and ambitious demographic, and with the buzz of a place on the move. **Harland Works** houses e-commerce site Folksy and digital designer/ engineer/maker Ben Tew, as well as a host of companies that span the full spectrum of creative and digital. **Globe Works**, originally built as an integrated processing site to produce steel, tools, and cutlery, is now home to a number of digital agencies and, until recently, Receptive, a digital tech startup.

Across the city and rising above the train station stands the iconic **Park Hill**, a large social housing project and a totem of Brutalist architecture. Through the work of developer Urban Splash, Park Hill has incorporated a hub of creative companies on the ground and first floor, with a renewed residential offer above. As soon as commercial space became available at Park Hill, eight creative digital companies took up space, including Human, Yoomee, Uber Agency and Can Studios. In the mid-80s, Sheffield City Council developed an economic policy based on Sheffield's creative and cultural offering, based in a geographic area that became known as the Cultural Industries Quarter (CIQ). Early movers included the **Leadmill**, **Red Tape Studios, the Showroom independent cinema, Yorkshire Art Space and the Site Gallery.** Spanning live music, recording studios, film and art, these early pioneers paved the way for other creative companies to take up residence in this neighbourhood. This area has become a hotspot for "young wealth creators" and those working in the creative digital sector.

The rise of **"meanwhile use"** space has enabled the creative digital sector to test and experiment with ideas, applications and partnerships. In Sheffield, the use of meanwhile space is pioneered by **CADS** (Creative Arts Development Space), founded by Steve Rimmer. Straddling traditional arts studios and commercial rental property, CADS manages 14 buildings and over 170 studios across the city, focusing their efforts to secure old industrial buildings in rundown areas of town, thus spearheading the regeneration of those areas. Occupiers of CADS studios include creatives engaged in a wide variety of disciplines, including digital making and digital arts, such as Chop Shop and Learn Create Sell. The latter, a social enterprise founded by Angga Kara and Zak Ahmed, provides training programmes in digital making for hard-to-reach community groups. Angga says, "It's the thread of digital making that brings this hotchpotch of people together. It's about using digital creative tools and methods to connect people and provide a peer-to-peer support community."

Learn Create Sell occupies a CADS-managed space in the centre of town where they have an open studio with a laser cutter, a vinyl cutter, computers with free design software and a large banner printer.

Meanwhile spaces play a significant role in creating a sense of community and place. They make it possible for commercial entities and retailers to see viability and vibrancy in a location they might not have otherwise considered. Sheffield has the perfect combination of empty buildings in a city centre location and a socially-minded and community-driven ethos. If a city invests in its creative digital innovators, the city in turn will reap the benefits of having educated and ambitious people move into areas of town that are historically underdeveloped. What is good for the creative sector is also good for the economy and, so far in Sheffield, the balance of gentrification has not been tipped too far in the other direction i.e. the artists and creatives who help make a place vibrant and culturally interesting have not been priced out, as in areas such as Hoxton and Shoreditch in East London. It's a fine balance to maintain and one that Sheffield would do well to invest in maintaining.

"It's a very clear statement of a desire for much stronger engagement in the city and with the wider community. We want the building to be a city asset that is available to a range of partners."

Gavin Shore on Jaywing's forthcoming move to Matilda Street



A definable city identity

Sheffield is a recognised brand largely because of the importance of its innovative steel and wider materials industry to global construction and advanced manufacturing supply chains. The "Made in Sheffield" marque provides a powerful identity to the city. "Made in Sheffield" is not just a stamp of provenance, but speaks to a guarantee of high quality and craftsmanship that provide a global demand for the products of Sheffield's makers – whether manufactured parts, high end cutlery or digital creations. The Floow was the first digital tech company to be awarded use of the marque, spearheading the way for other creative digital companies to follow suit. As true then as it is now, makers across the creative and digital sectors in Sheffield take enormous amounts of pride in the quality of their work.

Sheffield's character is defined by some singularities which have survived its industrial history. Problem-solving through innovation is one of the city's most unique attributes and, although the materials have changed, the attitudes which created this culture remain. A common theme across the many interviews conducted for this report was an obsession with high quality work, whether that's award-winning design (Joi Polloi), working with top international clients (Human), or making record-breaking games (Dumpling Design), to cite just three examples from our interviews. Creative digital companies in Sheffield are stubborn in their attention to detail, and our interviewees were rightfully proud of the fact that they only take on the most interesting clients and projects.

The legacy of advanced manufacturing continues to evolve through R&D-led innovation in Sheffield City Region. The ongoing work of the **University of Sheffield's Advanced Manufacturing Research Centre (AMRC)** places it on the international stage for high quality performance. This calibre yields commercial results for the City Region with significant investment by **Rolls Royce, Boeing** and **Airbus** amongst a range of others. In early 2017, **McLaren Automotive** announced a new facility to construct all the composite chassis for their Supercar production. Throughout 2016, the successful "**Year of Making**" campaign ran in Sheffield, cutting across a broad range of sectors including digital, creative, the arts. This campaign was based directly in Sheffield's heritage of "making", traditionally in the steel industry. What the Year of Making campaign successfully seized upon is how Sheffield's own "young wealth creators" are taking this heritage and making it their own, whether by moving into disused Little Mesters works (Regather, Portland Works, Harland Works) or by expanding the word "making" to include their own specialisms, setting creative and digital pursuits alongside manufacturing and engineering.

The word "making" has a powerful galvanising effect locally and translates well with audiences less familiar with Sheffield. It is inclusive and applicable across a range of sectors, and it can be interpreted in so many ways. No other UK city can lay claim to the word "making" with quite the same authenticity as Sheffield. Thanks to the Year of Making campaign, Sheffield is witnessing a resurgence of a city identity around the concept of "Made in Sheffield". People and businesses in Sheffield define themselves as "makers" across a wide spectrum of activity, from the creative and arts through to small-scale craftsmanship and large scale manufacturing, encompassing hardware hackers alongside software developers and digital product makers.

The commonality that runs through Sheffield's history, from cutlery manufacturing to creative digital products and services, is the same spirit of hard work, craftsmanship, innovation, attention to detail and obsession over producing a high quality product. Sheffield embracing making as an identity certainly fulfils that and means that the city is ever better placed to engage and welcome creative digital businesses, operating as they do at the cutting edge of modern-day "making". "It's a very bohemian city: imagine Shoreditch but with real culture. It has the biggest village vibe in the world with friendly and creative people. All in all we are a great creative city and we are only getting bigger and better!"

Anthony Fern, ATK Creative



Alongside making, Sheffield's identity is wrapped up with its geographical position - a third of the city is in the Peak District National Park and there are plentiful parks and woodlands within the city itself. Not for nothing is Sheffield called the Outdoor City. This closeness and connection between the city and surrounding countryside plays a major role in providing the right environment for creative thinking to happen.

Thomas Miller, co-founder of Music X Film, places immense importance on having this space to think:

"If we were in London, we'd be staring at a brick wall every day. In Sheffield, you can look out of any window and it's all green, you can get up and go for a walk in the park or go to the Peak District and give yourself a break. You have the space and time for ideas to blossom, whether that's writing the melody for a new track or writing a business plan."

This sense of space and patience is echoed by Jamie Busby, cofounder and CEO of Ten24, who says,

"There's no rat race compared to London or to other major cities in the North. It's a perfectly sized city, it's more relaxed, and the lifestyle is more conducive to creativity." Stuart Green notes that "there seems to be a high correlation between folks working in the software industry and outdoor pursuits. Having the Peak District on our doorstep also means that people come back in on Monday morning refreshed from have spent the weekend outdoors." "Sheffield is underestimated as a city. We'll always have our heritage in steel and manufacturing, but we also have some outstanding tech, creative and digital businesses. The creative digital sector in Sheffield is warming up considerably. The Year of Making helped a huge amount with this as it brought to light some of the amazing things happening here. We are on the cusp of something big in this city."

Scott Knowles, ObjectForm

SIA Gallery hosted an exhibition by Lance Wyman, famous for the Mexican Olympics graphic design. It was his only show in Europe.

Connectivity to other cities

Sheffield is an active city at the heart of a well-connected national network. Sheffield is the fifth largest city in the UK and is the gateway to the North of England. Sheffield sits two hours from London by train and an hour from Birmingham, Leeds, Nottingham and Manchester. It resides on the UK's principal north-south M1 motorway, close to four international airports and within an economic catchment area of 1.8m people in Sheffield City Region¹⁰, and 15.1m people in the wider North of England.¹¹

Proximity matters. Sheffield's central location plays a key role in attracting inward investment to the city. Being just two hours from London makes it possible to have client meetings within a day's travel from Sheffield, but also it provides space for focus on work. Matt Pyke at Universal Everything thinks that it's the perfect distance: "Having to travel to London means that you have to be discerning about what projects you take on. If I lived in London I'd probably end up going for coffees with anyone and everyone, but having to travel to clients means that I can ensure that the projects are worthwhile, and it also means I have time to focus on my work, and really let the quality of the work speak for itself."

In addition to the geographic connectivity, there is an increasing number of pan-regional networks that connect people and companies. Within the digital tech sector, the establishment of **Tech North** in 2015 brought much-needed visibility to the tech sector in the North of England, providing links between leaders in business and the community and bringing people working in the digital sector together across different regions of the North. **Media Yorkshire** is an industry-led organisation representing creative, digital and marketing firms in Yorkshire, facilitating collaborations across different disciplines in order to attract work to the region. **Culture Forum North** brings together the knowledge and experience of cultural practitioners and academics in the North of England and enables shared learning, co-creation and partnership working.

Locally, Sheffield has a number of different fora that connect individuals and companies working across the digital creative sector. **Sheffield Digital** is an industry-led body that acts as a connector for those working in digital tech, promotes the sector, and provides a single voice for advocacy and representation. **The Sheffield Creative Guild** brings together individual freelancers working in the creative sector for networking and collaboration opportunities. **MakerHub** is ramping up activity in 2017 to act as a network connector across the digital sector to provide opportunities for innovation and platforms for collaboration. Sheffield's independent venues also play a key role and act as meet-up spaces for these new disciplines. These range from galleries and studio spaces to performance venues. The regular events at places like **Bloc Projects**, **99 Mary Street**, **DINA** and the **Audacious Art Experiment** act as formal and informal places where ideas are exchanged and initiated.

"There is a broad mix of digital and creative businesses here, with plenty of potential clients locally and nationally. We relocated to Sheffield for better access to clients and talent. There is probably an awful lot more good work going on than most people realise."

Steve Bellingham of Rare Creative Group

Sheffield brims with activities, conferences, gatherings and events that draw visitors to the city with increasing momentum. This enables visitors to see the city in new ways and challenges existing perceptions. Visitors experience art, culture and music, casting Sheffield as a front-running place to be for work, life and enjoyment. Connect the Dots, mentioned above, is just one of many digital / arts / media festivals in Sheffield. Within the creative digital space. Sheffield is fortunate to be the home of DocFest, one of the largest international documentary film festivals in the world, inputting over £1million annually into the local economy. Another annual fixture is the Children's Media **Conference**, bringing together people from all over the world involved in developing, producing and distributing content for children on all platforms, from radio and TV to film and interactive media, and everything in between. In 2016, Offset, the educational and vocational conference for the design and creative industries, moved to Sheffield for its 10th edition. This was the first time that the conference had been held outside of Dublin and London. Also in 2016, the Children's Media Conference collaborated with the Site Gallery to put on an interactive exhibition of digital toys and games. Site Gallery has always prided itself on doing innovative things; one of the first projects that Laura Sillars, Artistic Director, was involved in was the "Virtual Reality Arcade" in collaboration with DocFest. This was the UK's first VR experience, before VR became more commercially available. Laura attributes this to, "[...] the spirit of adventure at Site Gallery, especially within the technology environment." Another firm favourite is Sensoria, showcasing cutting edge experiential digital / creative exhibitions. Sheffield's Design Week, run by Made North gallery, celebrates local, national and international design. Off The Shelf is Sheffield's popular and long-running literary festival, now in its 24th year, offering upwards of 200 events each year. Sheffield Hallam runs the Catalyst festival, and the University of Sheffield runs Festival of the Mind. This extensive list is but a small selection of the wide variety of festivals and events that fill up the calendar the whole year round.

Ten24 have one of the world's largest photogrammetry rigs. This has enabled them to work with Warner Brothers, Pixar, Sony and Sega. Using this rig, they digitised 800 characters for Final Fantasy.

Cultivating new ideas

A mark of a magnetic city is to the extent to which it can enable the spawning of new ideas. A critical part of this is providing the right environment for its young people, and here, Sheffield has a good record of success compared to other core cities. The city's first University Technical College (UTC) opened in 2013, specialising in engineering and the creative and digital industries, and the second UTC opened in September 2016, with a focus on computing, health sciences and sport sciences. The State of Sheffield 2017 report notes that there are strong linkages between Sheffield's young people and employers: "Sheffield has more than one and a half times the national average of teenagers taking up apprenticeships, meaning [that the city has] the second highest proportion of 16 to 17 year olds participating in apprenticeships than any other major city".¹²

Sheffield's two universities create a culture of innovation in the city. Both universities are extremely active in driving innovation to meet fresh challenges, whether in advanced manufacturing or health sciences. The world leading facilities at the Advanced Manufacturing Research Centre and at the Advanced Wellness Research Centre rightly stress ambition and a brilliant track record of delivery for a global supply chain. Factory 2050, on the University of Sheffield's new Advanced Manufacturing Campus, is the UK's first totally reconfigurable, digital factory for collaborative research. The University of Sheffield also has research partnerships with some of the major digital tech firms in the city, such as The Floow, WANdisco and Zoo Digital.

Sheffield Hallam University and the University of Sheffield also nurture the local entrepreneurial community with opportunities and facilities. Both universities have enterprise and employability facilities that provide work space, training, mentoring and activities for students across all disciplines to test out their entrepreneurialism. Sheffield Hallam University run their student incubator, **The Hatchery**, out of the Workstation, and the University of Sheffield have opened up their **Enterprise Zone** to provide co-working space for student and graduate entrepreneurs, alongside dedicated startup support. These facilities act as community hubs, sources of support and vehicles to spark new ideas.

Samantha Deakin Hill, Startup Coach for Digital & Creative at the University of Sheffield, has run nine **Sheffield Startup Weekends** to date, leading to it becoming one of the best Startup Weekends in the UK. Sheffield Startup Weekend has been the genesis of a number of successful digital tech startups, including **Airstoc, Exyo** and **Goodvidio**. Taking part in Startup Weekend Sheffield has inspired several individuals to

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make their first foray into entrepreneurship, as it not only gives people the initial introduction to the relevant skills, but also forges connections within the community, which are essential for any startup founder.

Darren Chouings, Startup Coach for Social Enterprise at the University of Sheffield, runs the University's **Social Innovation Lab**, a semester-long programme for students to help them to develop their social enterprise ideas before pitching in front of a panel of judges. Darren also runs the Sheffield branch of the **Global Social Storm**, a 24 hour hackathon. This competition facilitates international teams of students to work together to find sustainable solutions to real world challenges.

ObjectForm produced 3,000 3D printed decorative leaves, made entirely from recycled refrigerators, for a 10ft square Christmas display in the Aqua Shard restaurant at the top of the Shard building in London. In 2012, Site Gallery was one of three galleries around the UK who collaborated to host **Happenstance**, a three month "technologist-in-residence" programme with the aim to make the arts "digital by default" rather than digital as an afterthought. Leila Johnstone and James Jefferies collaborated on a number of projects that brought technology and art together, creating new and inspiring pieces and also shaking up the established organisational culture inherent within many art galleries.

Programmes or activities such as these help to nurture entrepreneurialism in Sheffield and play a part in sparking people's imaginations and making the connections that can help digital creative projects and companies to thrive.

Looking ahead, 2017 promises to bring further dedicated interventions to cultivate new ideas. Sheffield-based 3D printing company **ObjectForm** are partnering with Barclays and Sheffield Hallam University to bring a month-long pop-up Barclaus Eagle Lab to the city. During the month there will be an array of activities around 3D printing, Internet of Things and Virtual Reality, aimed at inspiring people to engage with these technologies. The Showroom Workstation has an ambition to create a creative digital hub, providing digital learning, idea generation and business support for the creative industries. A new organisation, **Kollider**, won £3.45m in capital funding from DCMS in late 2016, to provide a "digital business incubator" for the city. This is part of a wider Northern Powerhouse initiative to develop tech hubs in Sheffield, Manchester and Leeds. Sheffield Hallam University has plans to build on their reputation as a leader in games development and develop their Hatchery offering by moving into a larger building in 2017. This offer would include co-working and a makerspace, enabling their students to work alongside startup and scaleup entrepreneurs from the wider community. MakerHub is a community-led collective dedicated to providing the support infrastructure for Sheffield digital tech startups and scaleups via a tailored blend of entrepreneurial education, community engagement and access to finance.

Andy Barratt of Joi Polloi:

"There's a huge creative lineage and heritage in the industry here; there's a narrative that can't be unwritten. It's not by accident that Sheffield keeps on producing these amazing design companies."

Travis Ryan of Dumpling Design:

"Sheffield is independently spirited, punky, and rebellious. Within the sector, there is a sense of people always pushing each other to do more. People tinker away at their own project and take pride in showing off the finished result. You could make games anywhere in the world; the "office" is your laptop and a pair of headphones... one of the main reasons we stayed in Sheffield is because of the proximity to the Peak District. The environment does a lot to inspire us. Working in a small company, it's important to have time and space to think – this feeds into your development work."

Carl Cavers of Sumo Digital:

"The video games industry has got a huge heritage here; it's been happening in Sheffield since the mid-80s, that in itself has bred a lot of talent, there are a lot of small ecosystems in terms of games development in Sheffield. Sheffield Hallam has got one of the best and biggest games development courses in the world. There are so many digitally-based opportunities in Sheffield, whether that's at the AMRC or starting out as a founder of a tech company, and the sector doesn't get the recognition it deserves. Most salaries in this sector are higher than the average so, in terms of providing wealth and opportunities for the area, it's unparalleled." Sumo Digital works on significant games releases. They were lead developer of Little Big Planet 3 for Sony. They also work exclusively with Sega on their All Stars franchise.

Universal Everything worked with Radiohead in their studio to create an interactive music environment for their iPad app.

Attracting investment

The way that a city can leverage its assets to attract inward investment can make a huge difference to the economic growth and external perception of that city. Sheffield City Region has benefitted substantially from investment from across multiple sectors, and the Council and Sheffield City Region Local Enterprise Partnership have dedicated resources to drive this agenda forward. Inward investment is a vital ingredient of growth and is a key part of HM Treasury's Northern Powerhouse Strategy.

Ken Nettleship, Investment Manager at Creative Sheffield, states that the majority of creative digital companies moving to Sheffield are those looking for affordability in both office space and talent, rather than competing within the heated market of London. Companies that move to Sheffield find cost reductions in office space and in some junior roles, and benefit from proximity to new clients and access to wider supply chains.

The top 25 tech companies in Sheffield City Region employ more than 12,000 people and bring in more than £2billion a year. Ambitious and scalable creative digital companies find that Sheffield has an existing community of creative and like-minded people. The two universities provide a full pipeline of talent keen to stay in a city that continues to benefit from high favourability ratings from graduates. It is better and more effective to engage students and graduates on their doorstep, rather than drawing them to London. Further afield, there are 12 other universities within an acceptable "journey-to-work" time of the city, meaning that companies have access to talent emerging from Nottingham, Derby, Manchester and Leeds, amongst others.

In the creative digital sectors, lifestyle matters. The Outdoor City campaign, sponsored by Sheffield City Council, is particularly relevant and appealing to the creative digital sector. The lifestyle opportunities in Sheffield and the wider region are appealing for people looking for a stimulating work and life balance. The talent pool is not as transient here as it is elsewhere. With regards to foreign companies looking to move to the UK, whilst London is always a primary choice for building their brand, Sheffield can make a case as a location to move to in five years' time, for ambitious companies with a growth plan that will take them beyond London.

New funding streams that target the North of England specifically are newly available in 2017, filling a void where previously there was no targeted investment for this region. Accelerated Digital Ventures (ADV) and the Northern Powerhouse Investment Fund have significant funds that are available for digital tech startups, scaleups, and established companies in the North of England. This can only add to the already-attractive package for companies looking to relocate to Sheffield. For companies looking to raise their first or next investment round, it is a more attractive proposition to be based in a location where access to these funds is transparent and relatively easy, and the competition is less fierce than in an overheated market such as London.





"Sheffield is where we want our families to live. We did discuss other cities when we started out and thought that, as well as our personal reasons for wanting to be in Sheffield, it also had other advantages: a central location, good digital community and talent pool, some decent sized potential clients, lots of relevant (and free) events. There's a community of professionals who are probably as capable as people from most of the other major cities in the UK and it's a good place to live and raise a family. We're really proud of our city, there's a great mix of people, companies, network and clients."

Cam Spilman and Jon Rhodes, Paper



Strong Leaders

Leadership in Sheffield comes from a variety of formal and informal sources, with roles in civic and political bodies, as well as sector specific community leaders.

In the creative and digital community, we are fortunate to have an array of community leaders who work tirelessly across many different sectors, often in a volunteer capacity, to pull together events, projects and initiatives to bring people together, encourage collaboration and generally "make good stuff happen" in our city. The attitude in Sheffield is one of just getting on with it, not waiting for external approbation or permission, but seeing an opportunity and seizing it. Once a community-led initiative has a foothold, occasionally with private sector sponsorship, it is often the case that public sector support will follow through.

Two community-led initiatives that have been mentioned elsewhere in this report, **Sheffield Digital** and **Sheffield Creative Guild**, both have their genesis in a group of individuals working in the same fields (digital and creative in these instances) coming together to represent and advocate on behalf of their sector. As well as fulfilling a vital role in bringing visibility to the digital and creative sectors respectively, both organisations are able to participate in city-wide discussions at a senior level, bringing a collective voice that has more weight than the sum of its individual parts. The Creative Guild received match funding for an ACE bid from Sheffield City Council, Sheffield Hallam University and the University of Sheffield. Sheffield Digital established itself through sponsorship from both universities and some of the key digital tech companies in the city. "Across Sheffield's digital and creative sector there are nationally significant leaders pioneering new technologies and new business models. Whether that's Sam Chapman of innovative telematics firm The Floow; Lee Strafford who created the first major competitor to BT's dominance; or Carl Cavers of Sumo Digital who produce globally significant games, Sheffield's leaders are thriving in a fiercely competitive sector. The vibrancy of the city's economy rests with leadership of people like these, coming from different backgrounds and collaborating together on a shared vision.

Joi Polloi have won two BAFTAs for work on TV programmes "Humans" and "Live from Space". They also received an Emmy nomination for their "Don't Stop the Music" campaign.

Creative Digital Snapshot Report Survey Evaluation

Methodology

Services offered by businesses in sample

The data in this section is based on a survey carried out in January 2017. The sample had a tight focus, accepting only submissions from firms that specifically create interactive digital content or noninteractive content specifically for digital distribution, or that develop technologies to aid or automate this process. This filtering was performed by hand, in order to avoid misrepresentations and skews inherent in SIC and SOC-based approaches. In addition, the geographic scope was limited to the city of Sheffield, excluding surrounding towns and the wider region. By being focused in this way, we believe we have been able to gain a highly representative view of the overlap between the creative and digital sectors of the city's economy. 41 firms provided data, which by our best estimate represents roughly one quarter of the total number of qualifying firms in the city (excepting freelancers).

The resulting spread of services and sizes can be seen in the following diagrams.



Sizes of businesses in Sample



Freelancers (1 employee)
Micro (2-4 employees)
Small (5-20 employees)
Medium (21-99 employees)
Large (101+ employees)

Average turnover by size



Micro Business **£132,554**

Small Business £540,608 Medium Business **£2,017,500** Large Business

£35,900,000

Average turnover per employee £56,614

Workforce



Increase in confidence/outlook No change in confidence/outlook Decrease in confidence/outlook



Businesses with unfilled vacancies Businesses no with unfilled vacancies Many of these positions are hard to fill. Some have been open for 6 months or even longer.



Expect to recruit Don't expect to recruit May expect to recruit

This shows the sector is strongly project-based, with strong collaboration and a large and flexible workforce of specialists.

Proportion of businesses that have current unfilled vacancies

Exports



The vast majority of firms, from smallest to largest, export their services, although none do so exclusively.



30%

Small

Medium

29%

29%

Sheffield

Compared to other cities in the UK, how would you rate Sheffield's reputation as a creative digital hub?





There are a broad range of views on how people think Sheffield is perceived, but generally its reputation is felt to be some way below average and that the city deserves more attention for its creative digital chops. Another way of interpreting this is that there are a very small number of niche verticals in which Sheffield has a strong national reputation.

Which of these would most make a difference to the Industry in Sheffield?



RECOMMENDATIONS

Sheffield summons a huge amount of pride and respect from those who know it best. However, alongside this romantic view, most people are clear about the gaps between ideal and current reality. There were a number of key themes that emerged through the surveys and the interviews where it was perceived that "more could be done" to make Sheffield the creative digital hub that we believe it to be. We have set these out in the following recommendations. These present opportunities for civic, community, political and business leaders to engage with the creative digital sector and drive its growth for the benefit of the entire city.

Developing Sheffield's narrative

It is a common refrain that more can be done to sing about our successes; but what does this mean in practice? It is clear that talented individuals, investors, media and firms operating nationally within the creative digital sector need to understand the opportunities that Sheffield can provide. Aspirational creative digital firms should think afresh about Sheffield, given the physical renewal of the city, the wealth of talent, the pipeline of skills and the city's proximity to regional centres and international markets, amongst other highlights.

We recommend that the City Council, the LEP, the business community and local and regional media partners work together to develop the necessary marketing campaign to promote the creative and digital capability of the city and wider region. An engaging and interactive website, dedicated to the creative digital sector, should showcase the city's success stories, tying in the business opportunities with the desirable lifestyle, i.e. the Outdoor City campaign, and the multitude of festivals taking place in the city. This message should be widely promoted via social media campaigns (similar to the "This Is Made In the North East" hashtag, #ThisIsMINE) and via active engagement with alternative printed and online media (Our Favourite Places, Now Then magazine, The City Talking).

Advocating Sheffield's story

With a strong narrative for the city, the next opportunity relates to promoting this and advocating for Sheffield on a local, regional, national and international stage. We have companies in Sheffield creating products and providing services for international and well-recognised brands. In a collaborative city such as Sheffield, there is an opportunity for the 'benefitsby-association' to impact positively on all companies and individuals working within the creative digital sector.

We recommend that Sheffield's creative digital community itself does more to promote the city, with the support of an overarching public sector marketing message. The onus falls on businesses, individuals and intermediaries to shout loudly about the creative digital sector in Sheffield, for the benefit of all involved. This could be by ensuring that every good news story or PR piece put out by local companies includes references to the supportive, creative and innovative environment of Sheffield. Another suggestion is for business leaders to seek out a higher national and international profile by engaging with speaking opportunities or providing thoughtleadership pieces for the media, thereby putting Sheffield on the map. Alumni from Sheffield's two universities are CEOs, CTOs and COOs of companies across the world. As a city, we should do more to connect with our global alumni network to spread the message about Sheffield, and even potentially attract their companies to the city.

Providing space for creative digital companies

During the structured interviews conducted for this report, there were a number of comments on the theme of space that warrant ongoing attention and investment. Our interviewees appreciated the affordability of office space in Sheffield, but a recurring theme was the sense that we are bursting at the seams in our city, with limited follow-on space for early-stage entrepreneurs that is appropriate for their needs, and limited growing room for rapidly scaling digital companies.

We recommend public and private sector support for the creation of a variety of "hubs" within Sheffield for co-working, collaboration, incubation and innovation, across the entire broad spectrum of creative and digital. The DCMS capital funding that was awarded to the Kollider project for a tech hub will provide much-needed co-working facilities for the creative digital sector in Sheffield, although it is not yet clear exactly what the offer will be. There are many places in Sheffield that provide the space and opportunity for collaboration, ranging from the more established (Site Gallery and the Workstation) to newer cultural hotspots and meanwhile-use buildings (DINA and CADS studios). However, it must be acknowledged that this is often temporary and pop-up in nature, or dependent on grant funding, which creates a sense of fragility to the available spaces. Coupled with this, the Tech Nation 2017 report shows that Sheffield is rated lowest in the UK when it comes to "Location Quotient (LQ).¹³ This is a measure of digital density, i.e. the geographic concentration of digital businesses. The higher a cluster's LQ, the greater the concentration of digital tech businesses, which means that resources and requirements can be shared and combined. A high LQ is "good for a local economy, since it is associated with highly skilled and higher paid employment, and higher levels of productivity." There is a significant and long-overdue opportunity for a physical building with an open doors policy for everyone working in creative and

digital. This will drive more integration between the creative and digital sectors. Having creatives, designers, digital tinkerers, games makers and developers all in the same space will lead to cross-pollination of ideas, and create the conditions necessary for innovation to flourish.

Nurturing the ecosystem

The creative and digital sectors are, by nature, social and collaborative sectors. We should pay close attention to the vitality and vibrancy of the creative digital ecosystem that supports the individuals and companies working within this sector. There was a clear demand amongst our interviewees for ongoing investment in creating the right circumstances to encourage peer-to-peer learning and to provoke serendipity.

We recommend that the public and private sector galvanise to support the community leaders and organisations who are already working to create environments and opportunities for engagement within the creative digital communities. We must not underestimate the importance of building relationships across different disciplines. Events and fora that provide access to networks and advice, and that foster peer-to-peer learning and support, are essential to ensuring a vibrant ecosystem in which creative digital businesses can flourish. There is a need for more platforms at a company level, featuring events and fora that help companies to navigate larger opportunities at a national and international level. Targeted business support via incubation and mentorship, alongside accessible and affordable co-working space that is designed to foster innovation, would increase the visibility of the creative digital sector and seed new talent.

Breaking down silos, both perceived and real

As this report has demonstrated, the creative digital sector is incredibly rich and diverse. There is a wide array of talents and skills amongst the individuals working in this sector, from software programming to artistic direction, from coding to music recording, from film production to games-making. One perception of existing meetups and events in the city is that they cater to the same "type" of person, with the same people attending the same meetups. Familiarity builds trust and creates collaborations, but a balance is needed – new faces bring in new ideas. This echoes a key finding in the Tech Nation 2017 report that interpersonal networking is critical to the success of the UK's digital economy.¹⁴ We recommend that there be a more strategic approach to community engagement across the city as a whole. This should be led by the community, but with active support from the public and private sector. More visibility needs to be given to existing meetups, and those need to be as accessible as possible to a wide range of people. Coupled with this, there needs to be more strategic outreach to communities and companies who don't usually engage, whether that is due to time pressures or perceived barriers. There is a plethora of meetups and events, and the opportunity is for those various communities to pull together to ensure fora for sharing best practice in terms of community engagement across a more diverse section of the population. Reaching out to the business and professional services sectors is also essential here. As intermediaries, are they aware of the strengths (and challenges) within our homegrown creative digital sector? How can we better communicate with them and leverage their support?

Powering the North's cultural and creative vibrancy

The Northern Powerhouse Independent Economic Review, procured by Transport for the North, makes it clear that the North of England is nationally and internationally significant. We know that the cities of the North have a creative and cultural vibrancy that collectively rivals any place. However, too often, little effort is made to better connect those communities. We stand stronger when we stand together.

We recommend that Sheffield takes a lead in driving forward those connections between our neighbouring cities. As the geographic gateway to the North, Sheffield can play a key role in "connecting the dots" between the major cities of the North, for instance by holding conferences that are relevant for the creative digital sector, or by inviting internationally renowned speakers. The Founders' Network Summit, held in March 2017, is a key example: it brought over 100 tech startup founders from across the North of England to Sheffield for a day of learning and connecting with peers. Newcastle and Liverpool have seen similar successes with conferences such as Thinking Digital and the International Festival for Business.



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sheffield digital

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