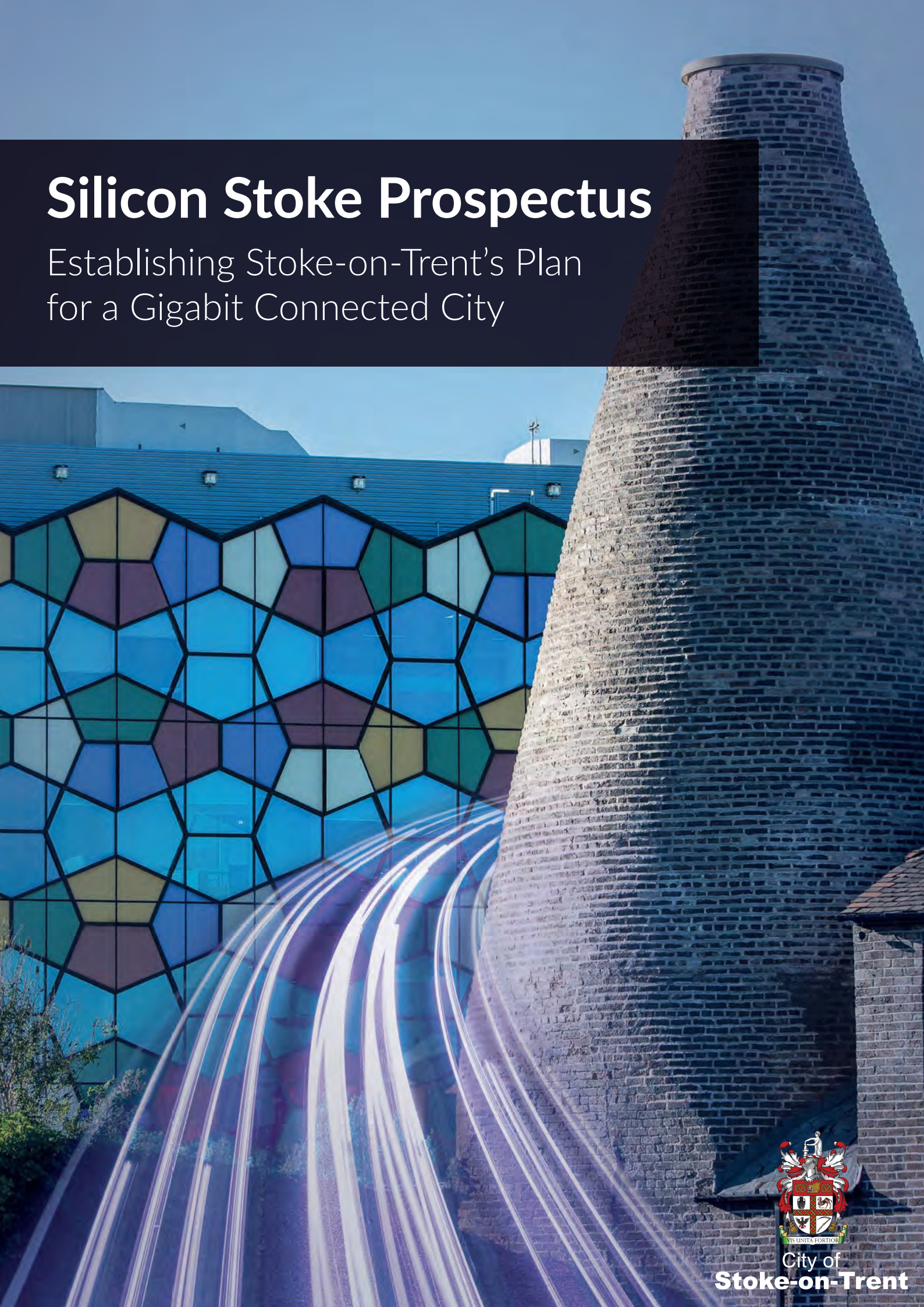
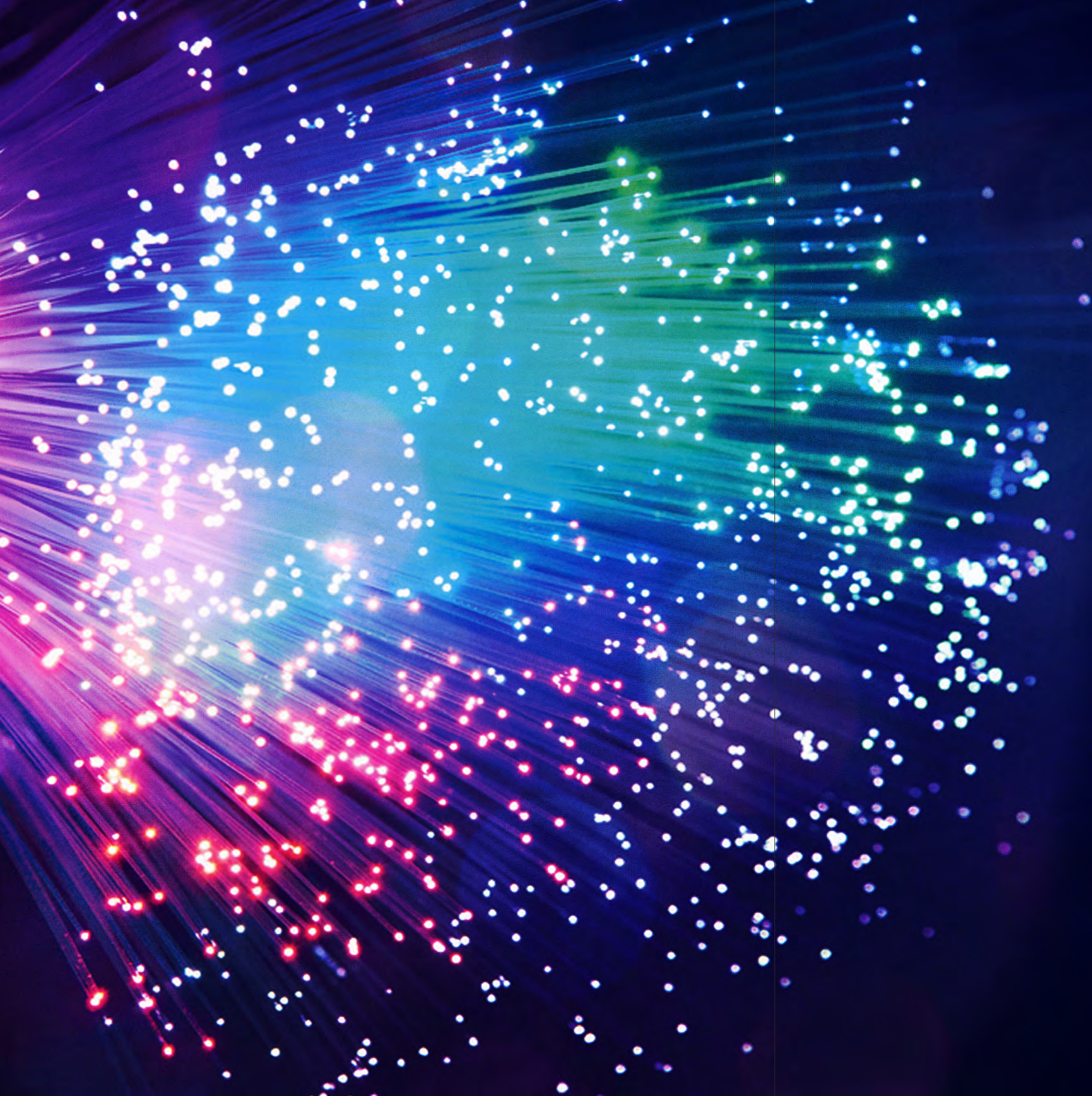
Silicon Stoke Prospectus

Establishing Stoke-on-Trent's Plan for a Gigabit Connected City



City of
Stoke-on-Trent



“This Prospectus establishes a strategic vision and framework for making Stoke-on-Trent the most digitally advanced city in the UK, achieving once again the renown it already enjoys for ceramics, a small but mighty city punching way above its weight in the national economy.

Silicon Stoke is no far-fetched dream. It is a growing reality. The foundations are already in place. The full-fibre gigabit network is complete. This prospectus sets out how the city is already starting to build on the network and lays out the opportunities that we must now exploit at pace, including the help we need to achieve our ambitions. I hope you will join us on our digital journey”

Jonathan Gullis
MP for Stoke-on-Trent North

Foreword

We are living in extraordinary times. Life as we knew it has changed. But one thing this pandemic is demonstrating, is the value of being connected.

None of us can predict the future. But we can learn from the past. Recent events have emphasised that ubiquitous connectivity, underpinned by pioneering innovation, is a must, not a nice-to-have, for ensuring the wellbeing of our citizens, businesses and society as a whole. We recognise next-generation communications as one of the key drivers of our city's digital transformation as we pass through and then emerge from the COVID-19 crisis.

Stoke-on-Trent actually learned this lesson years ago. We are a polycentric city of six towns and many other unique settlements built around potbanks and the resulting commerce. We have always operated through networks. Connectivity always mattered. From the turnpikes, canals and railways of yesteryear we now layer the limitless opportunity of virtual connectedness.

Stoke-on-Trent is joining a growing network of Smart Cities across the globe. In the same way that ceramics gave Stoke-on-Trent global brand recognition alongside the likes of Vallauris, Arita and Delft, now we have the opportunity to join a new network of smaller cities such as Aalborg, Eindhoven and Hobart in forging a new path in digitally enabled, sustainable growth.

Imagine a city where you could have remote access to a healthcare specialist who could assess, diagnose and potentially treat you at home, or a school lesson where you're virtually "transported" to the surface of the moon to learn about the solar system, or a meeting with colleagues who are in different parts of the world which feels like they are in the same room as you. The technological building blocks – such as sensors, screens and processors – are already in development. These experiences are also dependent upon high capacity networks and Stoke-on-Trent City Council are making this a reality through our Citywide Full Fibre Network. The possibilities are almost limitless.

We can't achieve this alone. This prospectus is an invitation to work with us and even play with us. It sets out an array of opportunities to use the infrastructure we have put in place to achieve amazing things for our city and our people and in doing so, act as an exemplar for those who want to follow.

Councillor Abi Brown
Leader – Stoke-on-Trent City Council

What does Silicon Stoke mean for Stoke-on-Trent?

The following table summarises the key benefits that delivering on this Prospectus could bring us and our key asks for support. The rest of the Prospectus then details some of our main ambitions in more detail.

The Opportunity	What it will take	What help we need
Use the city-wide full-fibre network to establish a complementary 5G network.	Successful market engagement to bring one or more MNO's on board for substantial roll-out.	Potential need for capital fund to expand our vertical infrastructure to support use of small cell technology to drive effective roll-out.
Expanded provision of digital vocational skills linked to work opportunities	Successful establishment of a Full Fibre Academy and then expansion into other technical provision, including establishment of an Institute of Technology	Full support from DfE and commissioners to secure these ambitions to improve the vocational offer.
Grow the SME digital sector.	Creation of an Innovation Hub to support the incubation and development of digital enterprises in the city.	Support from national Government and the LEP through revenue (and potentially capital) to develop the Centre.
Ensure we maximise the opportunity to deploy 'Internet of Things' opportunities in our manufacturing sector.	Undertake systematic review of the main opportunities for application of technological innovation in our key sectors.	Support from BEIS and the LEP to partner companies in ensuring that identified opportunities can be taken.
To be an exemplar location for digitally-enabled new homes and communities, through design, construction and occupation.	Definition of a programme of digital-enabled new build development on marginal brownfield sites, covering general needs and supported housing.	Recognition and commitment from Homes England that Stoke-on-Trent can act as a national test site.
To transform health and social care through improved digital connectedness to facilitate remote diagnosis, treatment and care.	Making full use of the open access full-fibre network connectivity, including dark fibre if required for ultra-secure, dedicated data transfer.	Adoption by NHS England and NHS Digital of the city as a national exemplar for digital-enabled health and care.
To enhance the city's educational offer through improved digital connectivity and first class digital education.	Connecting every school to the full fibre network and ensuring they are equipped to make full use of the capacity, plus investment in improved digital teaching.	Government investment in connecting all schools to the network. Support for a specialist digital free school in wave 15 to act as a hub for world class digital education across the city.
To develop a 'smart' city that embeds digitally enabled energy and transport infrastructure.	Use the opportunities of the new Energy from Waste plant, sustainable energy systems and a refreshed transport strategy.	Full engagement and partnership from the Department for Transport and its agencies in the development and implementation of a digitally-enabled transport plan.
To expand the city's offer and reach with respect to game-making and digital production.	Development of a Gaming Hub, expanded small enterprise support on the university site and the development of an arena with e-sports specialism in the city centre.	Government and Local Enterprise Partnership to work with the city to facilitate these ambitions.

Our Full Fibre Network

Our **Citywide Full Fibre Network** covers 113km citywide, providing access in terms of premises passed and premises addressed for 100% of residents and businesses in the city. This is a truly future proof Point to Point (PtP) network delivering gigabit plus symmetric services. The whole network has built-in dark fibre capacity, low latency and is ready to connect to vertical infrastructure, enabling 5G capability.

Business and residential services are delivered by a neutral host fibre operator, VX Fiber, who invest in and install the Fibre to the Premise (FTTP) infrastructure. Services are delivered through an open access platform and will include broadband, TV and VOIP as a minimum. VX Fiber have invested £10m in the current FTTP network with an additional £30m to cover the citywide FTTP. Whilst the network is under construction FTTP services will be delivered through backhaul, the first 10,000 properties are now accessible.

The current target for FTTP to properties is

84,000

Extensive full fibre backhaul will be required to ensure 5G mobile networks can be deployed. Without fibre, the revolutionary goals of 5G would simply be impossible. For 5G to work, there needs to be a dense fibre network – so that it becomes possible to reach this connected future as well as to enable technologies to continue to advance.

The city is therefore positioned superbly to have an early mover advantage in achieving comprehensive 5G coverage.

We already have a business case for 5G that would allow us to go to market within a reasonably short timescale. Our current Citywide Full Fibre Network will provide us with a significant amount of connected vertical asset that we can take to market. We also have a range of additional asset that could be connected if required.
We are in active discussion with expert intermediary providers that could help us maximise use of our vertical infrastructure making use of small cell technology.

What we need:

There may be a requirement for capital funding support to address gaps in our vertical infrastructure to secure comprehensive coverage across the city.

The Economic Dividend

Our ambition is to deliver a total economic impact of up to £625m to boost the local economy over the next 15 years, by making firms more competitive, attracting inward investment and jobs, improving homes and more. We have a full breakdown of how that impact can be achieved.

Network Build

There will be direct economic and employment impacts associated with the network build as new permanent and temporary employment is generated. To support this opportunity, we are creating a Full Fibre Academy in partnership with Stoke-on-Trent College that will train young people and older adults wishing to re-train in installation skills, including hands-on field experience. We will also seek to maximise the use of apprenticeships and opportunities for local contractors.

What we need:

Recognition by the DFE through the Regional Schools Commissioner and ESFA of the opportunity that the Full Fibre Academy represents and for the provision to be formally commissioned.

Existing businesses

We will see an increase in productivity and innovation as a result of making use of full fibre across Stoke-on-Trent. Businesses can expect to benefit from business expansion, improved productivity and greater turnover, as a result of improved access to existing markets, entry into new markets enabled through improved communication and distribution channels, and the ability to offer innovative new services.

Working with VX Fiber and other partners, we will facilitate the development of bespoke packages that can maximise the opportunity of connection to the network.

We will also ensure that new commercial property developments, for example, within the Ceramic Valley Enterprise Zone, can benefit from a gigabit broadband offer, as part of their market pitch to potential occupiers, including inward investors.

What we need:

A clear commitment from Government, building on that already provided by the Local Enterprise Partnership and City Council, to facilitate the further success of our Enterprise Zone to ensure the city gets full benefit from the realisation of the Full Fibre Network.

> **“It is clear to me that Stoke-on-Trent is brilliantly placed to use digital technology to expand its business strength. The Local Enterprise Partnership is fully committed to helping the city achieve that ambition and become renowned for its digital-shaped economy. We can do this through targeted investment in capacity and capability so that existing businesses are confident in their use of digital technology and new businesses are attracted to the city on the back of its digital offer.”**
>
> **Alun Rogers**
> Chair, Stoke-on-Trent and Staffordshire LEP

New and fast growth potential businesses

Significantly improved connectivity can encourage new business start-ups, enabled by easier access to markets, lower barriers to entry and the development of new business models that are digitally dependent and more flexible than established businesses.

Enhanced connectivity has been shown to make it easier and less expensive to start a business. Entrepreneurs are able to use increased computing and storage capabilities, more effectively to share data and work collaboratively. The shift to cloud and subscription services moves capital expenditure into operating costs, reduces the fixed costs of entry, and allows businesses to more cost effectively vary the scale of their activities.

We will create a Digital Innovation Hub to support new and expanding digital businesses through the provision of know-how, shared services and venture capital. It would provide a supported network for all organisations pursuing digital innovation and would enable them to influence and indeed lead the development of Silicon Stoke over the coming years, maximising the potential of the available infrastructure, facilitating company formation and growth and ensuring we are supplying the right future workforce.

What we need:

Support to establish the Innovation Hub (virtual in the first phase), including a reliable source of venture capital investment. Later, capital to develop a physical Innovation and Incubation Centre.

Industry 4.0 and Internet of Things

The emerging use of a wide set of digital technologies in the manufacturing sector is set to revolutionise the way the sector operates globally. The scope for applying technology in manufacturing is wide. The Boston Consulting Group (BCG) present eight technology drivers of Industry 4.0: industrial robots, networked machinery, data simulation, 3D printing, big data and analytics, horizontal/vertical integration, augmented reality and cloud computing.

IoT devices are expected to play an important role in future smart city applications but the deployment of connected devices, or the IoT in manufacturing is also proving to be the major driver of Industry 4.0 in the short-term. Although Industry 4.0 extends well beyond IoT, current developments present an early opportunity to gauge potential impacts.

We need to undertake a full assessment of the specific opportunity in Stoke-on-Trent to use the network to facilitate these technology drivers and determine the best targets for investment.

What we need:

Expert support to determine the Industry 4.0 potential of our industries and how best to exploit it.

> **“The Chamber of Commerce is fully committed to supporting the city in ensuring that smaller enterprises get the help they need to maximise the digital opportunity. There are many companies in Stoke-on-Trent with strong growth potential and we can help them unlock that potential with improved connectivity and confidence in choosing and using the right software platforms.”**
>
> **Sara Williams**
> CEO, Staffordshire & Stoke-on-Trent Chamber of Commerce

Improved employment opportunities

Evidence shows that improved broadband speeds and greater penetration of fibre in an area will lead to increased participation in the labour market and higher employment levels linked to the creation of new jobs.

Furthermore, as a result of improved communication channels and opportunities for remote working, there will be new employment opportunities, (a mix of new jobs and inward migration), and a reduction in migration away from the area that might otherwise have been at a disadvantage in terms of broadband availability/speeds/ bandwidth.

We need to maximise this opportunity by developing a comprehensive plan for increasing digital skills that will enhance the attractiveness of the local labour market. This will include:

- work with schools and colleges on their offer, particularly options choices at GCSE and A Level as well as vocational pathways
- work with both local universities on undergraduate, postgraduate and executive offer
- development of specialist provision, in partnership with the LEP and employers, to meet recognised market need for particular skills

What we need:

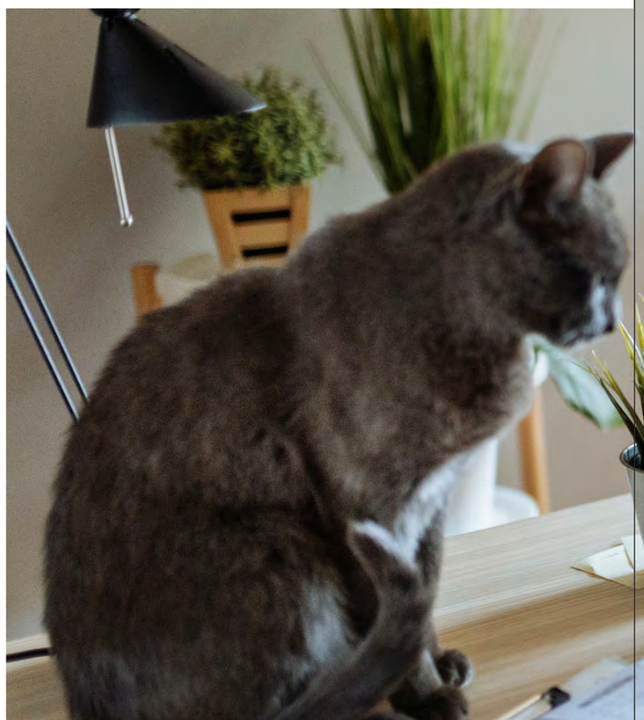
Support from Government and LEP in recognising the importance of digital skills investment to the levelling-up opportunity for the city. Specifically, to facilitate the establishment of an Institute of Technology in the city with deep specialism in digital vocational skills.

Flexible Working Practices

Research shows that flexible working practices are 21% higher amongst firms with some form of fibre broadband versus basic broadband, and that employee productivity rises significantly as a result. The widespread availability of full fibre broadband in homes and businesses can be expected to fuel continued growth in the use of fibre-enabled human resources, VoIP and other such systems. These applications will enable more employers and employees to communicate and work flexibly.

What we need:

Recognition that Stoke-on-Trent can act as a ready-made test-bed for testing different work and workplace models in the Covid and post-Covid environments, focused on increasing productivity



Private Household Benefits

Full fibre is expected to make the city's housing offer more attractive, pushing up house values where it is available. Research undertaken by leading price comparison sites highlights the importance placed on broadband connectivity when purchasing a new home. Unsurprisingly, we are already seeing housing developers on new sites negotiating to have full fibre connectivity in place in every new home as part of the core offer.

This improvement in the value proposition will over time have an impact on the investment return on new housing sites, making certain schemes viable.

What we need:

Recognition and commitment from Homes England that Stoke-on-Trent can act as a national test site for a comprehensive, digitally-enabled mixed tenure housing programme focused on marginal brownfield sites, through design, construction and occupation, including the opportunity to provide lifetime homes through embedded technology.

Social Dividend

Revolutionising Health and Social Care

“The early delivery in Stoke-on-Trent of a full fibre network with gigabit speeds, unlocks massive potential for the NHS in terms of enhanced healthcare. That includes remote diagnostics and procedures, as well as ongoing monitoring of patients including those in care homes. As well as being good for patients, this creates great opportunities for our workforce and can take pressure off our hospital system.”

Dr Paddy Hannigan
SRO for Integrated Care System digital programme, Staffordshire and Stoke-on-Trent CCGs

Technology Enabled Care Services (TECS) such as telehealth, telecare, telemedicine, telecoaching and self-care apps, have the potential to transform the way people engage in and control their own healthcare by allowing citizens to monitor their health and activity levels by themselves, so the need to take-up valuable clinician time to take basic health readings is no longer necessary.

The West Midlands Academic Health Service Network (WMAHSN) is working alongside Stoke-on-Trent Clinical Commissioning Group (CCG) on the TECS exemplars of person-centred care programme which sets out how digital technology can be used to deliver care with benefits including improved patient convenience and experience, increased understanding of health conditions, better clinical outcomes and cost savings.

Full fibre will enable the larger scale deployment of connected healthcare technologies. It will increase network capacity and reliability of service, allowing better real-time access to patient monitoring data and stimulating new technology development. Gigabit broadband could enable applications such as diagnostics-quality video streaming and sharing, which could allow consultations from home, reducing costs and the need to travel.

Examples of healthcare applications that could draw on the benefits of Gigabit connections:

- Remote assessment of patients via video and audio streams require high bandwidth – quality of video has to be high enough to enable precise identification of symptoms.

- High resolution brain or body scans consist of large file sizes, requiring high transfer speeds to send/receive these files in time-critical situations.
- Integrated patient-support applications – that could enable older people to live autonomously at home for longer (e.g. applications that help ensure elderly people are taking the right medication, and that health issues are detected rapidly).
- Incremental bandwidth requirements from use of multiple connected devices sending, for example, constant streams of data to a provider for AI processing and diagnosis.
- Lower latency and low jitter would ensure that home-based diagnostic scanning devices could be operated without lag, ensuring continuous diagnostic-quality images.
- Critical services, such as remote monitoring or stroke diagnosis, require higher reliability to ensure applications are fit for purpose and able to send/receive data at critical moments. Increased reliability will also be important in establishing trust in the new service.

What we need:

Adoption by NHS England and NHS Digital of the city as a national exemplar for digital-enabled health and care, making full use of the open access full-fibre network connectivity, including dark fibre if required for ultra-secure, dedicated data transfer.

Emergency/Blue Light Services

Critical services such as Blue Light provision will be able to manage urban risk in better and more cost-efficient ways, using high-definition CCTV, video-equipped emergency services, and the ever-growing range of alarms and sensors to integrate responses faster and more diligently.

The ability to merge CCTV networks onto a full fibre network will enable state-of-the-art HD video capture, sufficient future capacity and extensive cost savings.

What we need:

Commitment from the police, fire and ambulance chiefs to recognise the potential that the city represents to join up our emergency provision in real time.

Immersive Learning

It is important to recognise the benefits that full fibre connectivity will bring to schools – their admin and teaching staff and pupils. Instead of avoiding the internet due to slow speeds, schools connected to full fibre can make online content an integral part of the teaching/ learning process. As students are able to access online educational resources in their classes, teachers can use online educational programmes to best fit the needs of every pupil in the school.

Virtual Reality (VR) and Augmented Reality (AR) learning can be described as education that is distributed by VR and AR headsets. This form of education can provide an engaging way to deliver education and provide students with an in-situ experience. For example, the VR application Nearpod has created lesson plans that allow users to experience the Egyptian pyramids, the Great Barrier Reef, or even Mars.

In addition to making existing learning methods more effective, VR learning could also provide opportunities for new learning experiences and encourage life-long learning. Regardless of health, background, age, or income – users could virtually travel to historic sites and locations of great cultural value. When used with an Oculus VR headset, users can explore 900 different expeditions allowing children as well as adults and seniors to experience hard to visit places. We believe that every school and college should be connected to the full-fibre network as soon as possible.

What we need:

Government recognise the opportunity that such connection would provide to the educational offer of the city and thus the levelling-up agenda, and contribute a one-off investment programme to make this happen.

We are only in the foothills of how the digital revolution will change learning and teaching over the next decade. At Stoke-on-Trent College we want to be at the forefront of that change. It is therefore brilliant to see the city pursuing such a strong strategy for enabling digital education and we look forward to playing our full part in the future."

Denise Brown
Principal and CEO, Stoke-on-Trent College

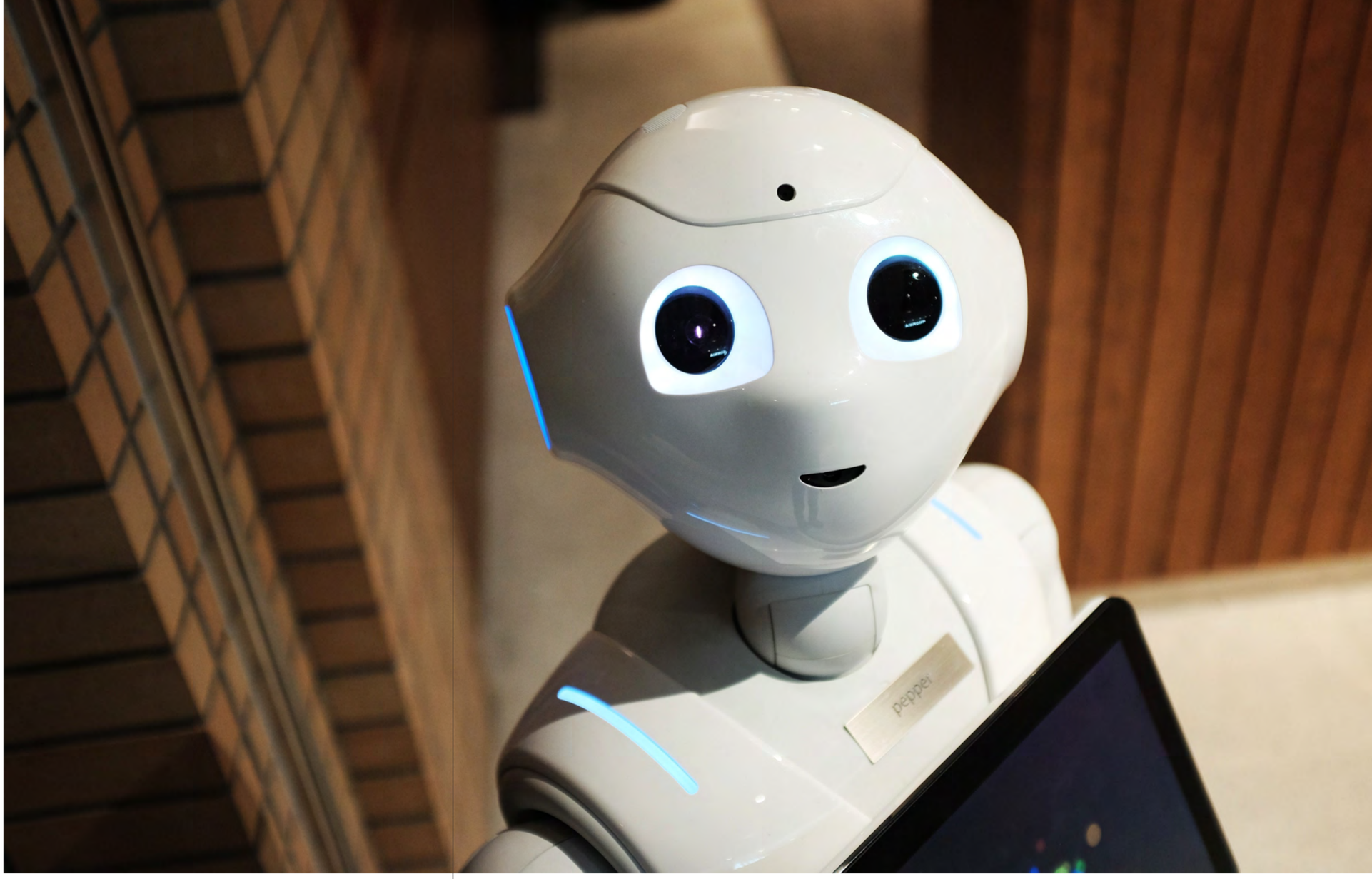
Social Housing and Digital Inclusion

Enabling households in affordable housing to connect to the network at an affordable price would be an important driver of digital inclusion and opportunity. While VX Fiber will establish a competitive price point the Council would value working with Homes England and others to find ways of reducing the barriers to access for poorer households, potentially through some form of voucher scheme.

With respect to new build, again working with Homes England we would want to ensure that we build in the full fibre connectivity into new developments, with a particular focus on the opportunity that exists with respect to supported housing.

What we need:

A commitment from Homes England and other partners to develop a digitally enabled exemplar new supported housing offer in the city.



Social Interaction

Social contact and interaction is good for reducing loneliness, improving mental health and maintaining our social capital. Enabling easier and more realistic interactions between people can alleviate loneliness and isolation and increase social capital. Immersive education and virtual socialising may help combat isolation, bring together different cultures and improve social inclusion.

The development of volumetric video technology may also find an application in maintaining and enriching social interactions. The availability of real-time holographic displays, which are currently being developed for professionals, may, in the future, also allow relatives and friends to attend social events from remote locations. For example, grandparents could attend weddings or birthday parties from far away using holographic images that enable them to participate in key life events and maintain an emotional bond with their grandchildren.

In the shorter term, the use of robots to provide companionship and health monitoring has already shown significant benefits in places like Japan and Scandinavia.

What we need:

Recognition from Government and the care industry of the opportunity that the city represents for testing and evaluating new digital forms of interaction and support.

The Eco Dividend

Smart Cities Infrastructure

“Improving the city’s infrastructure to help people access better opportunities is a key priority over the next decade. As we look to introduce a light rail system, a better bus network, and better rail connections, we will also need to access to the best digital connectivity and software platforms that are available.”

Jack Brereton
MP for Stoke-on-Trent South

Full fibre gigabit broadband will provide Stoke-on-Trent’s core infrastructure, including its energy, transport and utilities networks, with the digital speed, capacity and resilience needed to develop smart city solutions. It will enable the rollout of connected and interactive technologies and data to make a wide range of services and urban infrastructure better adapted to user needs.

The evidence on economic impact is strongest in the areas of energy, transport and technologies in the home:

- Smart energy: data communication networks integrated with electric grids, smart meters and IoT devices to collect and analyse real-time data and enable better energy management in homes, businesses and public spaces.
- Smart transport and logistic solutions: connected networks of sensors enabling smart roads/parking management and street lighting, leading to reduced congestion and energy use.
- Smart homes: including enabled IoT devices used to monitor and control energy and household devices remotely.

Our first priority is to develop a refreshed transport strategy that will seek to maximise the opportunity that our full fibre network and the opportunity for comprehensive 5G coverage can represent, for example, in the fulfilment of our ambition to develop a light rail network for the city and a smart bus network.

What we need:

Full engagement and partnership from the Department for Transport and its agencies in the development and implementation of a digitally-enabled transport plan.

The Creative Dividend

Digital innovation is crucial to the economic development of the city. It provides a wonderful opportunity to harness the strength of our cultural base as we pursue all the opportunities provided by our expanding offer in digital art, design and production. And it enables the creative reuse of our heritage assets to host new and growing enterprises."

Jo Gideon
MP for Stoke-on-Trent Central

Entertainment creation and production

Entertainment technologies are being developed which are not limited to a screen but completely surround the user. By using virtual and augmented reality the user's immediate surroundings are transformed into an illusionary environment. This is referred to as immersive entertainment.

Video services for entertainment as well as video gaming are two main drivers of online interaction and broadband data demand. Current predictions are that these will become two of the most important means of digital interaction.

There is also a significant opportunity within the city to develop our nascent capacity in film production, including post-production, building on the existing expertise at Staffordshire University.

What we need:

Support to develop a specific digital production plan for the city, including attraction of inward investment.

We recognise the special potential for Stoke-on-Trent as a UK centre for games and wider digital creative production. In Staffordshire University, the city already has an outstanding university for digital and creative production. When combined with a world class infrastructure, the city should become an increasingly attractive place to develop digital entertainment."

Dr Richard Wilson OBE
CEO, TIGA

Gaming

Since 2017, gaming has been the most popular form of entertainment in the world, surpassing TV, movies and music in terms of its share of revenue. In the first half of 2019, consumer expenditure on games was more than 45% higher than on video, and expenditure on games accounted for around half of expenditure in the total entertainment market.

Companies such as Google are developing cloud-based gaming services, such as Stadia, to make games more lifelike, complex and richer. For the best experience, this will require high-capacity networks to be able to deliver on a promise of a much more immersive experience.

The emergence of cloud-based gaming platforms as opposed to the traditional console or PC game will have a significant impact on the gaming sector – regarded as the "Netflix" for video games where the quality of broadband becomes more important than the capacity of the device used for playing the game.

Gigabit speeds will allow users to play games directly from the digital gaming platform, enabling them to choose a game from a library and begin playing it rapidly, without needing to download or install the game first.

The move to streaming games services is likely to lead to a market expansion as users will be able to use multiple devices to access the same cloud library of games without having to spend large upfront sums on consoles or other equipment. This makes access to cutting edge gaming significantly cheaper by removing the need for platform specific consoles. More importantly, this could stimulate the gaming industry by encouraging newer and smaller developers to enter the market as they will not be limited by console compatibility to reach users.

All of this context is important because Stoke-on-Trent is incredibly well placed to exploit this market opportunity by combining the full-fibre network, the UK market leading expertise of the university and an existing games sector.

> **"Staffordshire University is very proud of its growing reputation as the number one provider of specialist digital education in the country, with great private sector partnership and using some of the most advanced platforms available globally. We are committed to expanding that education offer and supporting the development and growth of new digital enterprises."**
>
> **Professor Martin Jones**
> Deputy Vice-Chancellor, Staffordshire University

With support from Historic England and the LEP, we are developing a Gaming Hub to start to bring together individuals and companies to collaborate and learn. We are progressing with the shell and core works for the Church Street Building on the historical Spode site with a view to accommodating the Gaming Hub. Partnership discussions have been held with both Staffordshire University and VX Fiber who are both highly supportive of the Gaming Hub proposal.

What we need:

Direct investment in the development and then expansion of the Gaming Hub along with specialist support in sectoral development.

City Centre Arena

As part of our ongoing regeneration plans for the city centre we are committed to the redevelopment of the very large East-West site that adjoins our cultural quarter.

At the heart of this mixed use proposal is an intention to develop a new leisure and entertainment facility, most likely, a small-sized multi-purpose arena. Our intention is to embed within the design of the arena development, the specialist capability to act a key national venue for e-sports and gaming.

What we need:

Support from Government and relevant agencies for this proposal, reflected through decision-making on Levelling Up and other relevant funding opportunities.

Next Steps

This first statement has set out our prospectus for Silicon Stoke and this will be shared with key stakeholders for further input. We have established a Silicon Stoke Strategic Board to develop a detailed delivery plan.

The plan will be published in 2021 and will include:

- Strategic Links
- Funding
- Delivering Proposed Initiatives
- Developing New Initiatives
- Engagement and Communications Plan

In the meantime, there are shorter-term opportunities that can be delivered in the next 6 months. For example, we expect to make rapid progress on the development of the Gaming Hub, Full Fibre Academy and the continued connection of properties to the gigabit fibre network.

Contact us

If you want to contact us for a further discussion on any of the content of the prospectus, please e-mail Caroline Mairs at caroline.mairs@stoke.gov.uk.

City of
Stoke-on-Trent