



# Go Beyond

The future is exciting.

**Ready?**

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# Foreword



The UK is one of the best places in the world to launch a start-up. Over the last 18 years, the UK has built more tech unicorns (companies valued at over \$1bn) than any other country in Europe; and we follow only the US and China worldwide.

Our start-up companies are some of the most dynamic and forward thinking in the world, using technology and creativity to transform financial services and manufacturing, retail and healthcare. Companies that might one day be world-beaters are born here, every week.

For our small businesses to continue to grow, innovate and compete in an increasingly digital world, they need access to cutting edge technology and fast and reliable connectivity.

And that is where 5G comes in.

In simple terms, 5G means an explosion of connectivity; and the opportunity to connect things – people, sensors, machines – in new and creative ways. 5G is fast, providing Wi-Fi speeds 'on the go' and significantly faster uploads and downloads. And 5G will work in real time, reducing latency so that people and applications can interact seamlessly without any 'lag'.

We want all businesses to benefit from this technology; and especially our most entrepreneurial small businesses.

We wanted to understand start-ups' experiences of connectivity today and their views about the future. How has connectivity helped them to date and where are networks falling short? Do they see opportunities from 5G? What hurdles are in their way? Could 5G help them get more from the technology they already use; or help them compete with established rivals?

We put these questions to leaders from 500 start-ups across the UK and found they are excited about what 5G will make possible – with around two thirds thinking 5G will benefit their business and help them close the gap on established rivals. We also talked to three incredible start-ups that are already experimenting with the technology today.

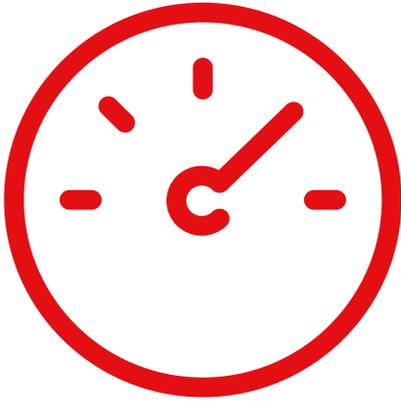
I hope you enjoy the report.

**Anne Sheehan**

Business Director  
Vodafone UK

#5Gamechanger

# Executive summary



- Connectivity has been key to start-ups' success, with 68% crediting the technology with their growth to date – and 71% admitting they can't afford for it to fail
- Today, however, networks are struggling to keep up with the volume of data and speed required by businesses
  - Half (51%) believe that their current network solutions are a bottleneck for the business
  - 63% wish their solution was smarter and could be upgraded more quickly
- 54% of start-ups are more excited about 5G than any other upcoming enterprise technology
- Start-ups have high hopes for 5G, including faster speeds (47%) and consistent connectivity (32%)
- 60% believe that 5G can help smaller, younger businesses to close the gap on more established rivals
- To avoid losing ground to competitors, 24% of start-ups are willing to invest heavily in new technology – and 44% are at least somewhat willing to take a risk
- But leaders have many questions about 5G technology
  - 34% want proof of 5G's benefits in action
  - 37% are keen for more information on the benefits of 5G
  - 38% would like more clarity about when 5G will be available in the UK
- 55% aren't convinced that 5G will roll out in the next 12 months
- The majority of leaders (56%) believe that 5G will transform the way they run their business
- However, it will be important for network providers and government bodies to engage with businesses about 5G, when the technology will be available and the opportunities it will offer

# Connectivity complications



**Two thirds (68%) of start-up leaders believe that connectivity technology has supported their business growth**

## The backbone of the business

Connectivity has played a critical role in the growth and success of UK start-ups. Two thirds (68%) believe that it has supported their business growth and even given them a competitive advantage.

Start-up founders point to a host of advantages from the technology. A third (31%) use connectivity technology for developing new products and services, rising to nearly half (45%) of businesses in financial services.

A further third (31%) use connectivity to improve productivity, rising to half of manufacturing start-ups, where margins are tight and efficiency is crucial.

Connectivity has enabled even small businesses to adopt advanced, cloud-based applications, to support functions such as remote working, sales and customer service, HR and finance.

Perhaps it's unsurprising, then, that 71% of start-ups say they rely on connectivity for parts of the business they simply can't allow to fail.

## Network limitations

As connectivity has grown in importance, however, it's becoming difficult for start-ups to find networking solutions that keep up.

Two thirds (63%) wish their current enterprise networking solution was smarter and could be upgraded more quickly. This rises to three quarters of businesses in financial services (76%) and manufacturing (73%).

The majority of start-ups wish their network had greater bandwidth (59%), while two thirds wish it was faster (67%).

In fact, half (51%) of start-up business leaders believe their network is a bottleneck for their business.

Complexity is also preventing businesses from fully utilising new technologies. More than half wish their network was more flexible for remote workers (59%), or that it could support Internet of Things (IoT) technology (53%).

Connectivity is the backbone of start-up businesses; to continue to evolve, start-ups need networks that are as fast, smart and flexible as they are.

## Case study



Xplore is a startup working with augmented and virtual reality. Chris Guerin, the founder and CEO, says “the firm is building an enterprise version of the game-streaming platform Steam that enables mixed reality developers to sell the experiences they have created.” Guerin says “virtual reality’s biggest use may not be within gaming, but within education.”

The introduction of 5G means Xplore will allow creators of virtual reality content to produce more and provide easier access for consumers. “5G will give us the bandwidth we need to stream the VR apps from our cloud servers to the headset with very little latency,” Guerin says. “Without this, the user wouldn’t have the real-life experience we are aiming for, instead experiencing delays and poor quality visuals which can cause nausea and disorientation.”

## High hopes, but clarity needed

With that in mind, start-ups have high hopes – and expectations – about what 5G technology can deliver for their businesses.

Half expect faster speeds (47%), while a third are looking forward to a more reliable and consistent network connection (32%).

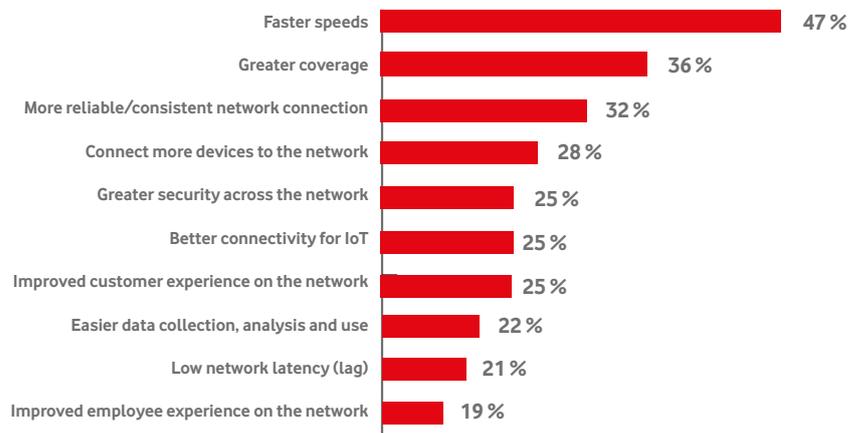
Only a fifth highlighted low network latency or reduced ‘lag’ as a benefit of 5G (21%).

Understandably, given the newness of 5G, start-ups still have many questions about the technology and how it could benefit them:

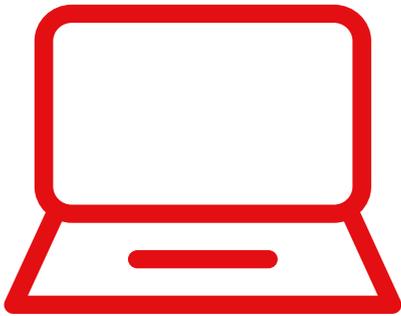
- 34% want proof of 5G’s benefits in action
- 37% are keen for more information on the benefits of 5G
- 38% would like more clarity about when 5G will be available in the UK

Start-ups are waiting for more information, and would like to see the benefits of 5G brought to life.

### What will be the benefits of 5G technology?



# Closing the gap



Nearly two thirds (60%) think that 5G could help younger businesses close the gap on more established rivals

## A key driver for the future

As well as being critical to their growth to date, start-ups see technology as a key driver for the future. Business leaders recognise significant opportunities from technologies including:

- Cloud computing (17%)
- Mobile working (12%)
- IoT platforms and functions like data analytics (12%)

However, more than half are more excited about 5G than any other upcoming enterprise technology (54%), rising to nearly three quarters of leaders in financial services firms (71%).

When it comes to the main benefit of 5G, businesses of every size are most excited by the prospect of faster speeds, which was selected by 39% of businesses who define themselves as small office/home office (SoHo), 15% of the smaller SMEs and 18% of the larger SMEs.

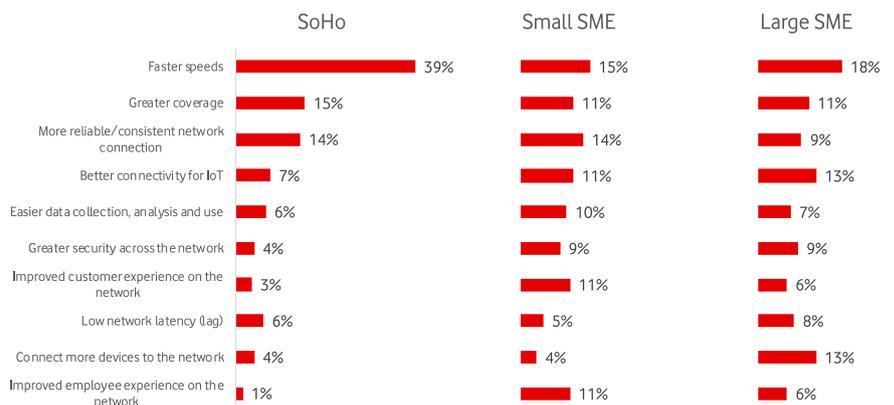
But enterprises' views of the second most important 5G benefits are split by size, reflecting different stages in growth.

For SoHo businesses it's greater coverage (15%).

Amongst smaller SMEs, speed is followed closely by a more reliable and consistent network connection (14%) and the ability to deliver improved customer service (11%).

Meanwhile the largest SMEs believe that the ability to connect more devices to the network (13%) and better connectivity for the Internet of Things (13%) are the next biggest benefits of 5G technology.

### Which of these is the single main benefit of 5G technology?



## Case study



Conigital is using artificial intelligence to develop connected and autonomous vehicles for ground fleets. From its base in Birmingham, Conigital provides both on-vehicle automation and off-vehicle operations, to support both partly and fully automated fleets of vehicles in airport environments like Manchester Airport. Conigital is benefitting from the slicing capacity of 5G, which enables operators like Vodafone to provide portions of the network for specific use cases like driverless cars, to deliver the extremely reliable connectivity needed for the technology.

## Conquering the competition

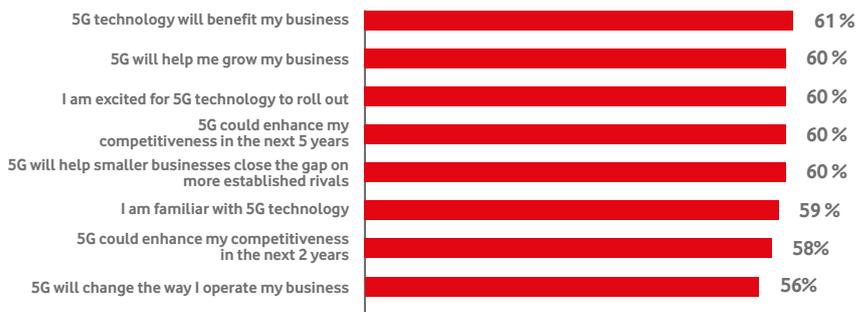
And start-ups believe 5G might give them an advantage over their rivals.

Three quarters (76%) agree that better connectivity gives businesses an advantage over the competition, and that it's strategically important to their organisation (71%).

Couple this with the fact that three quarters (75%) believe that their agility helps small businesses compete with larger rivals, and it becomes clear that the speed promised by 5G is important to start-up leaders.

As a result, nearly two thirds (60%) think that 5G could help younger businesses close the gap on more established rivals.

The thoughts of start-ups on 5G



This belief is even more pronounced amongst start-ups in the financial services space, where connectivity and agility are believed to be even more important in keeping up with the competition.

The vast majority of these businesses (86%) believe they must stay up to date with technological trends to succeed, and are more likely than their peers in other sectors to see agility as an advantage (85%).

## Adventurous investment

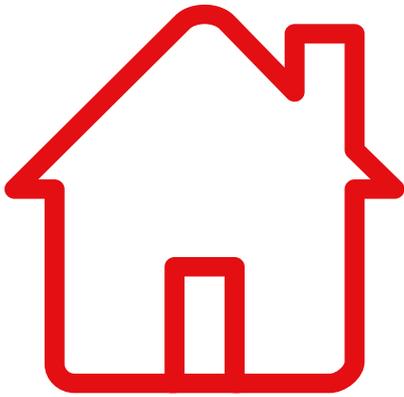
Start-ups believe they can gain a competitive edge through 5G, and are concerned about losing ground to their rivals if they adopt the technology first.

As a result, start-ups are prepared to be relatively adventurous with their technology investments to try to get ahead.

A quarter of start-up leaders are willing to take a risk on new technology and even invest heavily to try to gain competitive advantage (24%). And a further 44% are at least "somewhat" willing to take a risk on innovations like 5G.

With 5G becoming available in locations including Birmingham, Bristol, Cardiff, Glasgow, Manchester, Liverpool and London in the months ahead, 60% of start-ups are excited for 5G to roll out.

# A bright future



A fifth of start-up businesses (20%) believe that 5G represents the single biggest opportunity of all current and developing technologies

## Challenges ahead

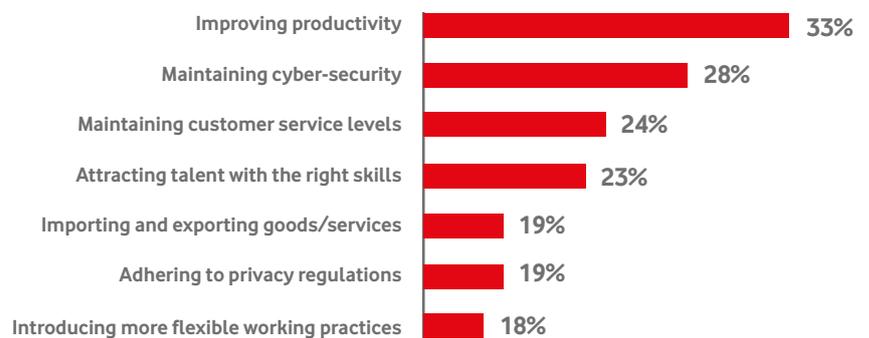
We are living in disruptive times, and start-ups are under no illusions about the hurdles they must overcome to establish and grow.

When considering their main challenges over the next five years, start-up leaders point to improving productivity as their biggest priority (33%).

From a technology perspective, they highlight the difficulties of maintaining cybersecurity (28%) and using data (27%), highlighting the significant role that data analytics will play in the years ahead.

A quarter of businesses (23%) point to digital transformation – the task of getting to grips with new technologies – as a key challenge; meanwhile 18% point to implementing more flexible working strategies to keep up with employee demands.

### Which of the following will pose challenges for start-ups in the next three years?



## Technology's rocket fuel

Start-ups are already investing in new technologies to meet these challenges. As 5G is rolled out, improved connectivity will enhance how these tools work – and create further opportunities for businesses:

- 46% of start-ups have deployed mobile working: 5G will enable seamless collaboration with colleagues in real time
- 43% of start-ups have deployed cloud computing: 5G will facilitate higher capacity data transmission, enabling applications to work at speed
- 21% of start-ups have deployed IoT solutions: 5G will act as an enabler for IoT
- Perhaps because 5G will enhance these technologies, a fifth of start-up businesses (20%) believe that 5G represents the single biggest opportunity of all current and developing technologies

## Case study



### mativision

London-based Mativision produces and delivers interactive 360° content and immersive applications, including augmented, virtual and mixed reality. Mativision helps companies deliver experiences from live entertainment to enterprise training and medical education – working with Vodafone to deliver a live 360° RUN-DMC concert to celebrate the anniversary of the first mobile phone call, for example. Mativision has developed the first 5G-ready immersive content delivery platform leveraging 5G's low latency to cut the lag time for users, and the increased capacity delivered by 5G to enable live-streamed 360° video and interactive experiences alongside seamless video-on-demand extended reality content.

## Realising the potential

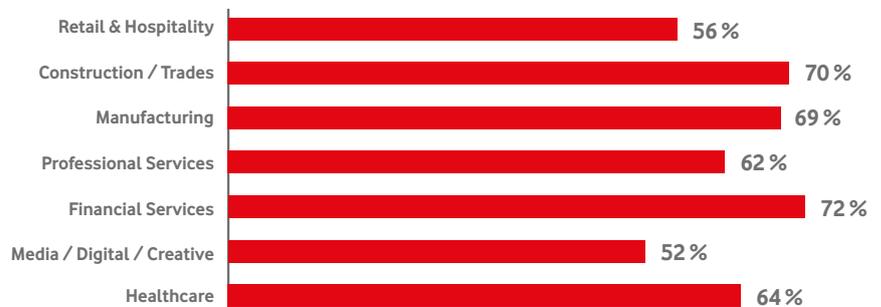
Start-ups believe in the potential of 5G to change their business. The majority of business leaders believe it will transform their operations (56%) – rising to 69% of manufacturing and 78% of financial services start-ups.

A third (36%) expect 5G technology to bring such opportunities within the next five years and a similar proportion agree that this connectivity will be important for delivering new products and services (31%).

However, to get there, start-ups say they need help in understanding how 5G can work in practice. Just under a third (30%) would like examples of how 5G could integrate into their business.

At the Vodafone Digital Innovation Hub in Salford, start-ups can gain access to 5G, and technologies like IoT and high-speed fibre. It's just one example of how Vodafone is empowering today's start-ups and small businesses with the expertise and technologies to help turn their blueprints into reality, and to help UK start-ups become global leaders in their fields.

How many businesses in different industries believe 5G technology will benefit them?



# Final thoughts



Start-ups are helping to build our future every day and these growing businesses will be key to our prosperity in the digital world.

Start-ups are confident about the future and are embracing the agility and the technology needed to take on their biggest rivals around the world.

To continue to succeed, businesses of all sizes in the UK need access to world-class connectivity and ultimately the potential of 5G.

At Vodafone, we've been working towards 5G switch on for three years. We've been upgrading our masts and building the UK's only converged all-fibre fixed and mobile network. We've invested more than £2 billion in 5G because we are convinced it is a game-changer – for the UK as a whole, for the UK economy, and for UK business.

And initiatives like the Vodafone Digital Innovation Hub will showcase the potential for 5G and help start-ups and entrepreneurs.

We want you to start using this technology! Using it in your business, and using it to drive innovation and challenge the limitations of today.

Our businesses have ambition and creativity. We're truly excited to see what UK enterprises of every size achieve with 5G in the years ahead.

#5Gamechanger

# Methodology

This report is based on the findings from 508 online surveys completed during May 2019. Respondents were decision makers and leaders from UK start-ups and SMEs in the retail, healthcare, manufacturing, media, professional services and financial services sectors.

The future is exciting.

**Ready?**

