



# A bright Gigabit future...

The UK's £11bn Gigabit opportunity

# Gigabit opportunity

Every day, people, businesses and public services rely on Virgin Media to stay connected.

And in times like these, our services are more critical than ever for millions of people around the country. Covid-19 has changed the way we live, work, learn, socialise and connect with the people and things that matter to us.

While the pandemic has accelerated a digital shift, it has been a long time coming. Over the past 20 years, as most of the country has adopted faster home broadband connections, our lives have become increasingly connected.

Just two decades ago, a typical home broadband connection might have powered a single desktop computer with speeds of 0.5Mbps. Today, our homes are filled with multiple smartphones, tablets, TVs, laptops, games consoles, speakers, and even lightbulbs and doorbells that constantly send and receive data.

This transformation has been made possible through continuous investment to provide consumers and businesses with ever faster and more reliable connectivity – all while usage and demand has kept increasing. As the UK's fastest widely available provider, we've pushed boundaries and have unlocked new technology for our customers.

Today, we provide speeds that would have been scarcely imaginable 20 years ago, but we can't stand still – we need to connect our customers to what's coming next.

Gigabit broadband will help us keep pace with demand, connect all of our devices and power the next generation of smart appliances and applications such as remote healthcare, holographic and augmented-reality experiences, cloud gaming and ultra-high-quality streaming. Simply put, it will let us experience the future – no matter what it is.

Our plan will see us roll out gigabit broadband offering speeds of more than 1,000Mbps across our entire network, covering more than half of the country, by the end of 2021. Today, as we launch Gig1 in two further areas, London and Northern Ireland, we've reached a major milestone: more than 16 million people across the country can now benefit from these future-proof connections.

Our gigabit rollout is transforming connectivity overnight without the need to dig up streets. This investment in our network and next-generation technology is creating new opportunities and transforming lives for people across the UK. It will also be an essential component in helping the UK adapt and bounce back from the pandemic.

The benefits are clear: gigabit broadband meets the growing demand for data, helps power our connected homes, enables seamless remote working and supports our nation's digital backbone both now and in the future. In doing this, it unlocks economic opportunities worth billions of pounds each year.

We'll keep pushing forward to give the UK the gigabit future it needs and deserves more than ever.



Lutz Schüler  
CEO Virgin Media





# Connected London

Digital connectivity is a lifeline in keeping Londoners connected throughout the pandemic.

It helps people access online services and entertainment, work or learn from home and stay connected with their friends and family.

At City Hall, I'm driving the Mayor's mission to bridge the digital divide we are seeing during the crisis and ensure that every Londoner has digital access. This means securing good connectivity where they live and the opportunity for basic digital skills and a device should they need it.

Virgin Media's upgrade and launch of Gig1 will bring much-needed additional capacity to help give around six million Londoners swift access to gigabit capable speeds.

It's an important and welcome investment in our great city which will make a real difference to Londoners.



Theo Blackwell MBE  
Chief Digital Officer for London

19x  
faster than London's  
average broadband

6m+  
Londoners can access  
gigabit speeds

2.6m  
homes in London  
connected to Gig1



# Demand for data

It's difficult to imagine life without broadband. Yet 20 years ago, broadband internet as we know it did not exist.

In 2000, Telewest Communications, which later joined with NTL to become Virgin Media, launched cable broadband in the UK with an industry leading maximum speed of 512Kbps – that's just 0.5Mbps.

Today, Virgin Media is the UK's largest gigabit provider, taking broadband from its humble beginnings to the next generation – offering speeds thousands of times faster than just two decades ago.

Data consumption has been increasing in a significant and sustained way over that period and now the vast majority (87%) of us rely on the internet every day.

While speeds of 0.5Mbps were revolutionary at the time, the broadband breakthroughs we've made since have enabled the development of new technologies which have transformed the way we live, learn, work, shop, communicate and play.

In the early 2000s, multi-megabit speeds allowed us to download files, marking the beginning of music sharing and the streaming revolution that followed. By 2009, 50% of Britons had access to basic broadband in their homes with connections robust enough to stream online video. It's no coincidence that Netflix launched in the UK three years later. And today, ultrafast broadband is meeting our demand for 4K TV, video calls, the latest connected devices and minimal download times. Our demand for data has soared with these new technologies.

Covid-19 has further accelerated our growing hunger for data – by the end of July we had seen an average 50% increase in download traffic and an 80% increase in upload traffic. From juggling virtual home-schooling with working from home, to scheduling video consultations with the GP and organising online grocery deliveries, we've seen a surge in traffic on our network.

During the busiest week of the lockdown, Virgin Media customers were downloading a third more data than before, burning through an extra

## 32.5 GB of data

That's enough to:

stream  
**40 hrs**  
of Netflix

receive more than  
**5,000**  
emails

listen to  
**700 hrs**  
of music

### What does this mean for the future?

If we've learnt two things from recent events, the first is that the demand for data is **not** slowing down. Staying connected has never been more important to us and increasingly that means being digitally connected.

The second is that while it's hard to pinpoint exactly how things will change, technological innovation will continue to transform our lives. A decade from now, advanced technologies will have reshaped how we live – just as they have over the past ten years. We need future-proof broadband to not only keep up with our growing data demands, but also to ensure we're ready for what's to come.

**This is the gigabit era.**



# Our connected homes

A key reason we're using more data than ever is because our homes have become smarter and increasingly connected. Doorbells, speakers, security cameras, plug sockets, lamps – connected devices are popping up in every corner of our homes.

This change has occurred in just a few years. In 2017, 9% of households had a smart speaker but three years later that had shot up to nearly a quarter.

Today, 99% of Virgin Media homes have at least one smart home device, with our average customer connecting nine devices to their network. This growth is set to continue. According to IDC analysts, by 2024, the smart home market is expected to reach more than 200 million units, growing 16% annually for the next five years.

At the same time as we're filling our homes with new connected devices, we're filling them with more people. Multi-generational homes are increasing while the total number of households and families is expanding – up 6.8% in the last decade according to recent ONS data.

And we are all spending more time online. According to Ofcom, UK adults are spending more than a quarter of their waking day online. In April 2020, when the UK was in lockdown as a result of Covid-19, consumers spent an average of 4 hours 2 minutes online each day – an increase of 37 minutes each day per adult compared with January 2020.

This growth in the number of connected devices – as well as the number of users – means more competition for bandwidth in our homes. This is leading to tension: our research reveals that a third of people wish they could turn off another person's WiFi to improve their own, and nearly a quarter of us have argued with the people we live with about not having enough bandwidth.

This pressure is set to increase as more connected devices enter our homes. And with bandwidth hungry next-generation games platforms, 4K and 8K TVs and smart security cameras topping consumers' wish lists, we'll need to transform our connections to keep up.

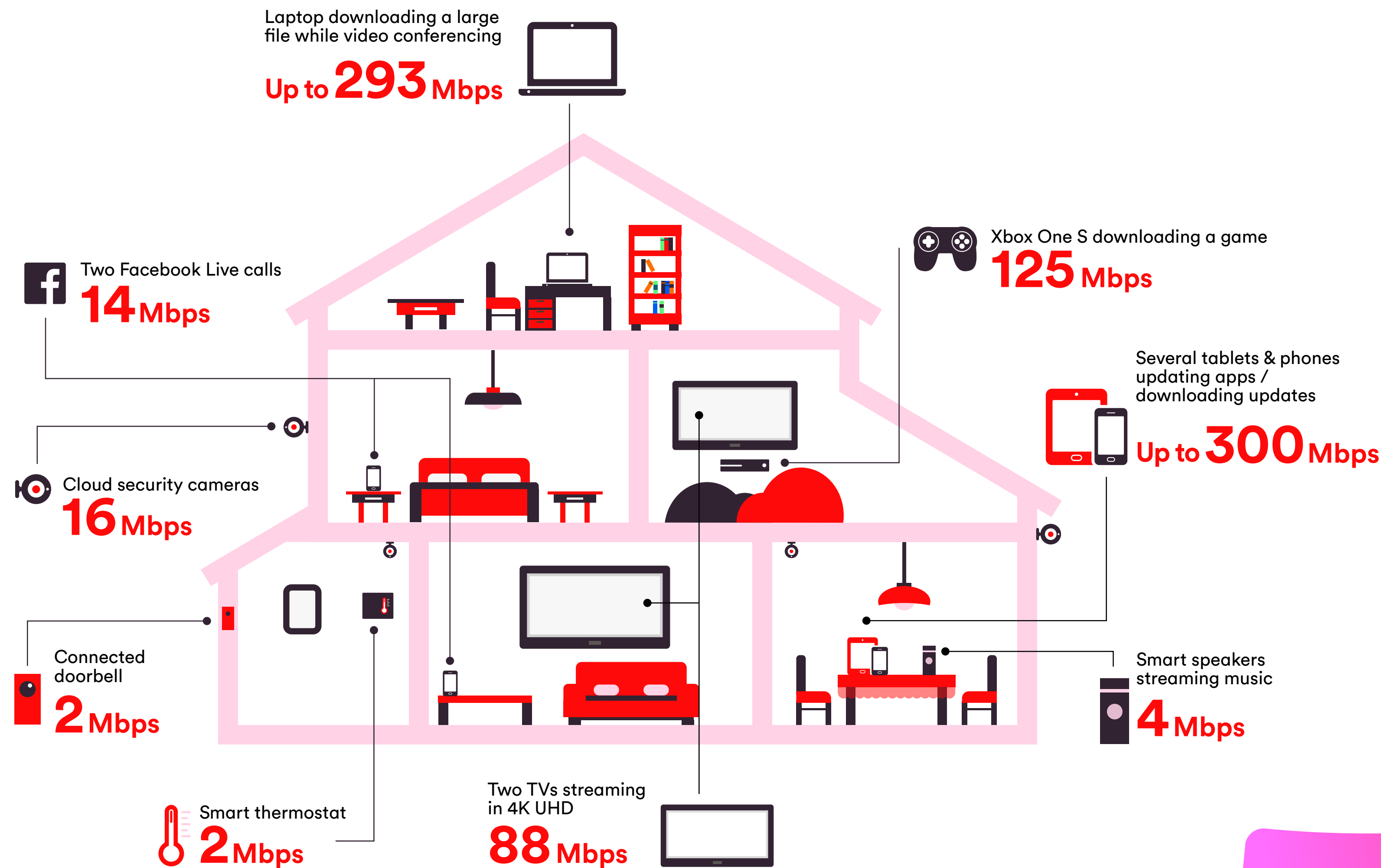
**99%**  
of our customers have  
at least one smart device

**200m**  
smart home  
devices by 2024

**4<sup>+</sup>hrs**  
spent online  
everyday

**x9**  
connected devices  
on average

# Connected home devices



Gigabit broadband makes more bandwidth available for each connected device to use. This is important when you have lots of devices connected at the same time - and means no device will need to slow down if you connect something new.

Device	Bandwidth demand (up to) in Mbps
Smart thermostat	2
Connected doorbell	2
Four cloud security cameras	16
Two Facebook live calls	14
Smart speaker streaming music	4
Xbox One S downloading a game	125
Several tablets and phones updating apps and downloading updates	300
Laptop downloading a large file while video conferencing	293
Two TVs streaming in 4K UHD	88
Total in-home demand	Up to 844Mbps



# Keeping Britain working

From cats on keyboards to Zoom cameos from the kids, the nation has been forced to quickly adapt to the highs and lows of working from home.

Our research reveals that nearly half (43%) of the UK's working population has both lived and worked under the same roof since the beginning of the first national lockdown, with 42% of those surveyed working from home five days a week

This dramatic change in our working patterns has meant our broadband connections have never been so important – they've become fundamental to keeping the country working.


As many workers moved from their offices to their kitchens and living rooms, almost overnight, business output has become much more dependent on fast, reliable connectivity in the home. While employees and broadband networks have adapted well, the unexpected shift has created new challenges. Nearly half (46%) of home workers have had to turn off their video in a meeting because of a poor broadband connection, with a third (33%) indicating that colleagues have been late or had to skip a meeting entirely due to connectivity issues.

Alarmingly, homeworkers report losing an average of 11 minutes per day to slow broadband – equivalent to more than four working days since the start of the first national lockdown. Widespread adoption of reliable, gigabit broadband would help to future-proof home connectivity and eradicate this lost time almost immediately, with our analysis revealing this could have helped reclaim £7bn of lost working hours since the start of the lockdown period.

The cost of slow broadband continues to grow every day. In late September, the Prime Minister warned that coronavirus restrictions could last until the spring. Tackling broadband delays would save each remote worker three days of lost time over the next six months, creating an economic opportunity worth nearly £1bn of working hours per month while helping the nation to work safely, efficiently and productively.

Just one in five (19%) home workers report that they want to return to the office full time, and many organisations are investing in digital applications and flexible ways of working that will be in place long after coronavirus restrictions have lifted. It's quickly becoming clear that reliable, fast and future-proof connectivity is now not a luxury. It's an essential part of our working lives and our digital backbone as a nation, worth more than £11bn a year in working hours to the national economy. Connectivity has never been more vital.

The 'future of work' is happening today – we cannot allow slow broadband to hamper economic growth. With gigabit connectivity, we can give the UK the boost it needs to bounce back from the impact of Covid-19 and unlock billions of pounds of economic opportunity in the future.



Gigabit broadband  
could unlock an  
**£11bn** per year benefit



# How ultrafast broadband is keeping us connected

The Bates family from Leeds has been making the most of gigabit broadband since they signed up to Gig1 in August.

The family – Simon, Catherine, Molly (12) and Elsie (4) – is a ‘connected’ household with close to 20 smart devices including TV set-top boxes, TVs, laptops, game consoles, tablets, mobile phones, smart watches, speakers and security cameras amongst other devices. The family’s previous connection of just 50Mbps with a different provider made it difficult for everyone to use their devices at the same time without delays. Simon said:

*“We were able to connect our devices on our previous service but it was unpredictable and not as fast and as fluid as we’re now experiencing. The kids can watch videos and play games online at the same time as us streaming TV shows and films – it’s brilliant.”*

With Catherine now working from home, the family is more reliant on their broadband than ever. Talking about their changing situation, Simon commented:

*“Now Catherine is working from home and regularly on video calls, it is vital that we have fast broadband to work but we also have other devices that need to be performing at the same time. Gigabit broadband has made this seamless.”*

The Bates family is now using their gigabit connectivity to embrace the smart home capabilities that faster broadband can support with Alexa devices and smart central heating throughout the home. Simon added:

*“With the use of an app, we are able to control the heating and can even manage this on the move. It’s vital that our home stays connected at all times as this can impact the entire ecosystem of our home.”*

Having experienced the power of gigabit broadband, the Bates family say they could never go back to a slower connection.

“

*We rely on it – it’s become integral to our day-to-day life. Whether that’s continuing to work from home, my children streaming videos and playing games online, or adding more smart devices to my home - it’s all dependent on fast broadband.*

”





# Future tech trends



## Carrie-Ann Skinner

Tech Editor,  
Good Housekeeping Institute

The rise of the smart home is one of the biggest trends of recent years. Consumers are embracing smart doorbells, security cameras, lights, plugs and smart speakers which can all be controlled at the same time. It's clearly making life much easier but requires fast, stable broadband to ensure they all work seamlessly.



## Mike Diver

Head of Content,  
GAMINGbible

Online multiplayer gaming is already huge and GAMINGBIBLE has seen that 2020's unique circumstances have accelerated the growth of online gaming communities. As game-streaming services like Google Stadia and Amazon Luna evolve, next gen download only consoles launch and in-game updates increase in size, reliable and ultrafast broadband will become a cornerstone of simply making this hobby manageable.



## Ernest Doku

Tech Expert  
at Uswitch.com

This roller coaster year has underlined the importance of reliable and fast broadband connections, with households dependent on the internet for their work, entertainment and even socialising – especially as homes become even smarter. Our need for dependable connectivity isn't going away, with consumers purchasing ever more connected devices to ensure their 'new normal' runs smoothly.



## Tom Cheesewright

Applied Futurist

Our connected future is clearly one of multiple, parallel demands on our bandwidth, wherever we are but particularly in the home. This is where more of us are settling, for more of the day, to work, learn and be entertained. As applications in all three domains make increasing use of the capabilities of our hardware, demand is only going one way.



## Paolo Pescatore

PP Foresight,  
Tech, Media & Telco Analyst

The rush towards streaming content and entertainment will proliferate, creating opportunities for innovative and unique storytelling. With providers fighting for viewers' attention, personalisation is increasingly essential to the multiscreen future. Bringing content to life will fuel user interaction, engagement and drive new business models – all underpinned by robust and reliable connections. The arrival of gigabit connectivity paves the way for endless possibilities.



## Will Gosling

Partner,  
Deloitte UK Human Capital

The future of work is accelerating – we are currently condensing decades of planned growth in remote working into months. High speed bandwidth and connectivity is going to be essential for organisations and individuals alike to thrive in this new world of work.



# A bright gigabit future

“*Demand for ultrafast broadband is only going in one direction.*”

Now more than ever, we depend upon our broadband to connect us with everything that matters. We're using more devices, more of the time, and those devices are using more and more bandwidth.

Whether our connectivity is helping us to keep working, access the latest entertainment or bringing us together with friends and families in virtual get-togethers, our expectations have permanently shifted.

With so much at stake, we simply can't afford to wait for the future-proof gigabit connections that will power the technology of tomorrow.

Yet as this report makes clear, too many people are still struggling with slow broadband. The gigabit opportunity is worth billions to the economy and could unlock a new wave of gigabit applications with the potential to boost productivity, keep us healthy and bring us closer to the people and things that matter to us.

Virgin Media is already the UK's largest gigabit provider and our plan will see us go further and faster than any other operator when it comes to rolling out next-generation broadband services by the end of 2021. And with recent trials already delivering multi-gigabit speeds on our network, as well as an established expansion plan in place, we stand ready to connect what's next.

With the right conditions, we could go even further and build future-proof connections to millions more homes and businesses, deepening the economic and social benefits of next-generation connectivity.

With billions of pounds of benefits waiting to be unlocked, it's time to embrace the gigabit opportunity.

Find out more at  
[www.virginmedia.com/gig1fibre](https://www.virginmedia.com/gig1fibre)



# Methodology

## Lost time

Lockdown started on 23 March 2020. 23 March to end 5 November is 32 weeks and four days.

3Gem polling of 3,000 UK adults carried out online in October 2020 for Virgin Media found remote workers had lost an average of 11 minutes per day to slow broadband.

$11 \times 5 = 55$  minutes lost per week.

$55 \times 32 + (4 \times 11) = 1,804$  minutes lost.

$1,804 \div 60 = 30.06$  hours lost.

Assuming a typical 7.5 hour working day,  $30.06 \div 7.5 =$   
**4 days lost to date since 23 March.**

Annually,  $55 \times 52 = 2,860$  minutes lost, equivalent to 47.67 hours or 6.36 days.

## Value of lost time

Average salary is £585 per week  
(ONS Employee earnings in the UK: 2019).

Assuming a five day working week,  $585 \div 5 = £117$  average salary per day.

$4 \text{ lost days} \times £117 = £468$  average cost of lost time per person working remotely since 23 March.

Annually,  $6.36 \text{ lost days} \times £117 = £743.6$  average cost of lost time per person working remotely p.a.

UK working population 32,591,000  
(ONS Labour Market Overview: October 2020).

46.6% of UK population working from home  
(ONS Coronavirus and homeworking in the UK: April 2020).

$32,591,000 \times 0.466 \times £468 = £7,107,706,008$  (**£7.1bn**) value of lost time for UK population working remotely since 23 March 2020.

$32,591,000 \times 0.466 \times £743.6 = £11,293,355,101$  (**£11.3bn**) value of lost time for UK population working remotely p.a.

