



Broadband & Mobile in Northern Ireland

INTRODUCTION TO THE TELECOMMUNICATIONS MARKET

- The UK telecommunications market is fully privatised and competitive and is independently regulated on a national basis, by the Office of Communications (Ofcom).
- Government investment in telecommunications is possible, but has to be undertaken with caution, to avoid distortion of the market and to comply with European Commission broadband and competition regulations and guidance.

RESPONSIBILITIES

What the Department for the Economy (DfE) can do

- We have powers under the Communications Act 2003 to make investments which are important to Northern Ireland.
- We can improve:
 - The extent;
 - Quality; and
 - Reliability

of telecoms networks and services, where the market has determined it would not be financially viable to do so.

What DfE can't do

- We cannot specify particular technology solutions, to do so could be a breach of European Commission State Aid regulations.
- We cannot compel network operators to invest in particular areas, or deliver services at particular prices.
- We cannot intervene in disputes between service providers and their customers.
- We cannot determine policy, as that responsibility has been retained by the UK Government.

What Ofcom can do

- They are responsible for ensuring that there is appropriate competition in the market place.
- They have legal duties to ensure the UK has a wide range of communications services, including high-speed services such as broadband and that it is used in the most effective way.
- They are here for the general protection of the consumer, from unfair practices.

What Ofcom can't do

- They cannot intervene in disputes between service providers and their customers. More information can be found here <http://consumers.ofcom.org.uk>

BROADBAND TECHNOLOGIES EXPLAINED

Broadband can be delivered using a range of technologies. This includes:

Fixed Line

- Delivered over existing telephone lines, or cable TV lines, using a mix of fibre optic cable and copper wire. The speed of the connection is affected by the distance between the premises and the exchange or cabinet.

Satellite

- A satellite service is usually delivered when a fixed or wireless service is not available.
- Satellite broadband is an essential means to deliver faster internet access for rural communities, businesses and individuals.

Fibre to the Premise

- This extends the fibre network to the customer's home

Fixed Wireless

- Uses radio waves to provide a broadband service to customers. This is a "line of sight" solution which is used in difficult to reach locations where fixed line broadband is not available, due to cost or physical limitations.
- It is used extensively as a cost-effective, high speed option for delivery of broadband services in remote locations.

Mobile

- Mobile broadband is wireless internet access delivered through mobile phone masts to computers, mobile phones and other compatible devices.

MOBILE TECHNOLOGY EXPLAINED

What is a Dongle?

- A dongle is a small USB device that allows you to access the internet with a 3G or 4G mobile broadband connection. It can be referred to as a dongle, internet stick or USB network adapter. Dongles are popular because they offer greater flexibility than fixed line connections and can be used on the go.

What is 3G?

- It is the third generation of wireless technologies. Its main enhancement over previous wireless technologies is high-speed data transmission. 3G is mostly used by mobile phones and other mobile devices as a means of connecting to the internet.

What is 4G?

- It is the fourth generation of mobile phone communications and is a successor to 3G standards. 4G provides ultrafast mobile broadband internet access.
- The area covered by 4G services from all four operators is to rise to a minimum of 85%, up from 79% in 2020, and specifically coverage from at least one operator to increase to 98%, up from 97% as a result of the [Shared Rural Network Programme](#).

What is 5G?

- It is the fifth generation of mobile networks.. According to Ofcom's Connect Nations 2022 Report, 5G is within reach of a growing number of consumers, with around 20% of mobile handsets now 5G capable (up from c10% in 2021), and significant increases in coverage observed across the UK. 5G promises to deliver peak download speeds of 1Gb/s. To place in context you will be able to download – not merely stream – a full HD movie in less than 10 seconds on a 5G network.

FACTS ABOUT BROADBAND

- Broadband is measured in 'bits per second' the speed at which information can be transferred.
- It is through a mix of technologies that ensures that a broadband service is available everywhere in Northern Ireland.
- 97% of broadband connections in Northern Ireland are achieving speeds of 2 Mbps or more*.
- Many premises in Northern Ireland have the option of subscribing to Superfast Broadband (24Mbps or more). This has been attributed to the roll-out of FTTC technology by both the Department and BT.
- It is estimated that 88% of Northern Ireland's broadband connections (675,000) are via Superfast Broadband.
- Broadband speeds can be affected by a range of factors which include distance between an exchange and customer premises; number of users simultaneously sharing a service (this is known as "contention"); and the type of internet browsing activity a customer is undertaking.
- Other things that can affect a service are electrical interference caused by other household items and the capacity of computer and router equipment used.
- Superfast broadband supports download speeds of at least 24Mbit/s, to deliver these speeds providers need to install fibre optic cabling, which supports higher speeds.
- Ultrafast connections, with a speed of at least 300Mbit/s has also increased to 35 % or 266,000 premises, this is largely due to Virgin Media upgrading its network. **
- Consumers should carefully consider their requirements. Ofcom publishes guides that may assist and are available from <http://consumers.ofcom.org.uk>

* Ofcom report: Connected Nations 2017: Northern Ireland

**Ofcom Connected Nations Northern Ireland 2022

FACTS ABOUT MOBILE

- 88-92% of geographic area in Northern Ireland is covered by all operators for 4G data services**
- 89-99% of geographic area in Northern Ireland is covered by all operators for indoor call services**
- The four main operators of mobile coverage in Northern Ireland are Virgin Media O2, Vodafone, EE and Three.
- There are also more than 30 virtual network operators. These operators, such as Sky, Virgin Mobile, iD Mobile, Tesco Mobile, giffgaff and others, are each carried on one of the main networks and will have similar coverage to its host network.

WHAT HAS BEEN ACHIEVED

- Since 2007 the Department has invested £70 million in initiatives to encourage private sector upgrade to networks, primarily in rural areas.
- Superfast services are available to Small, Medium Enterprises (SME's) in Northern Ireland have increased from 71% to 75% between 2016 and 2017.
- The NI Broadband Improvement Project contract of £19.3 Million was awarded in February 2014. The project was completed in 2016, with improvements made to 46,000 premises
- The Superfast Roll-out programme – a contract of £14.1 Million was awarded to BT in February 2015 with improvements estimated to over 42,000 premises.

Shared Rural Network (SRN) The Shared Rural Network a project developed by the UK's four Mobile Network Operators (MNOs) (EE, Vodafone, Virgin Media/O2 and Three) and UK Government, will deliver 4G coverage to 95% of the UK, enabling rural businesses and communities to thrive.

As part of the legally binding commitments set out within the SRN, mobile coverage in Northern Ireland will reach 98% from at least one operator, and 85% from all four operators compared to 97% and 79% at SRN commencement baseline respectively.

Mobile Action Plan for Northern Ireland (MAP NI)

The MAP NI was published on 23 June 2022. It was developed by a cross-sectoral working group which included members from central and local government who consulted with stakeholders including industry, UK Government and Ofcom Its aim was to identify issues which inhibit the rollout of mobile networks and sought to establish solutions to enable better, faster and more consistent mobile coverage throughout Northern Ireland.

The Northern Ireland Barrier Busting Taskforce (NIBBT)

The NI Barrier Busting Taskforce was established on 13 December 2022 and will take forward the recommendations contained in the MAP NI.

* Ofcom report: Connected Nations 2017: Northern Ireland

**Ofcom Connected Nations Northern Ireland 2022

NATIONAL PROGRAMMES

Universal Service Broadband Obligation

- Every home and business in the UK has the legal right to request a decent, affordable broadband connection.
- If you can't get a download speed of at least 10 Mbit/s and an upload speed of at least 1 Mbit/s (this is defined as a 'decent connection'), you can request an upgraded connection - subject to a proposed cost threshold of £3,400 per premise.
- You can make this request to BT on 0800 783 0223.
- Consumers outside this threshold will have the option to cover the excess costs themselves. You might be able to get a connection via a satellite broadband service or wireless internet service provider. To receive one of these, you will need to install a dish on your property.
- Ofcom is responsible for implementing the USO.

Wireless Infrastructure Strategy

- The UK government published the Wireless Infrastructure Strategy, setting out the steps to ensure that all parts of the UK have the connectivity they need to unlock opportunities for growth and prosperity.

Very Hard To Reach premises

- The UK government launched an £8 million fund to provide capital grants to further promote new satellite connectivity to a small cohort of up to 35,000 of the very hardest to reach premises. Further details on the value of the grants, and how to apply, will be released in due course.

Barrier Busting

- The Product Security and Telecommunications Infrastructure Act 2022 is now in the implementation phase, following Royal Assent in December 2022. Provisions relating to upgrading and sharing of telegraph poles commenced in February 2023. Provisions relating to upgrading and sharing of ducts under private land commenced in April 2023. These provisions will make it easier for operators to deploy gigabit broadband networks without the need for lengthy negotiations with site providers.