

SEPT 2023

UK TELEPHONY AND TELECOMS SWITCH- OFFS EXPLAINED

CONNECTIVITY CHANGES



Connectivity Changes

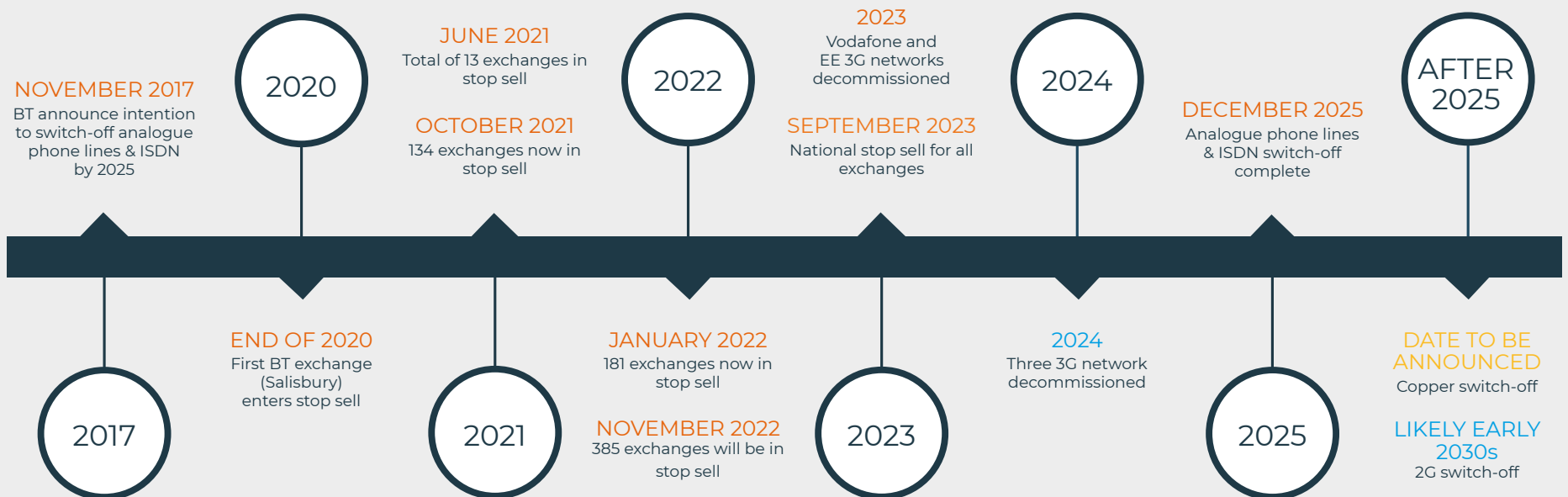
The UK's telephone networks are changing. There are a few major change programmes people need to be aware of...

1. Analogue telephony switch-off

2. Mobile network sunsetting

3. Copper switch-off

The Switch-off Timelines





1. 2025 analogue telephony switch-off

1. 2025 ANALOGUE TELEPHONY SWITCH-OFF

What's happening?

Telecom Providers in the UK are decommissioning their analogue services and are moving to fully digital networks. This means that analogue phone lines in residential and business premises are being replaced by digital equivalents.

How will this impact me?

For residential users this change will usually only involve the customer having to plug their phone into their Internet router instead of a wall socket.

Business users are likely to be using several different telephone services, including ISDN, and will have a range of systems that have phone connections, some of these are obvious, like Private Branch Exchanges (PBXs) and contact centres, others are less obvious.

Example of technology that will be impacted by the switch-off:

Fire and security alarms

Car park barriers

Point of sale terminals

Telecare alarms

Traffic lights

Boiler controls

Remote monitoring

Building management systems

Helpful definitions:

PSTN: Public Switched Telephone Network. The 'traditional' telephone network that is now being replaced with digital telephony.

ISDN: Integrated Services Digital Network. An international standard for end-to-end digital transmission of voice, data, and signalling. Confusingly, although the definition of ISDN includes the word "digital" the service does not use Internet Protocol and so is being replaced as part of the process of upgrading the UK to digital (IP) phone lines.

Many of these systems are likely to need to be upgraded as a result of the switch-off.

Businesses need to determine how best to move to digital, this could include a like-for-like move to a digital phone line, a move to mobile telephony, use of alternative technologies such as IoT, or most likely, a mix of these approaches.

So, what are the issues? You need to know where your existing phone lines are and how they are being used so you can plan for their replacement – this is not always simple to determine, with some lines being installed decades ago.

Some equipment uses signalling that cannot be carried reliably over a digital phone line, examples include telecare and building alarm systems. These devices could need to be upgraded or replaced before they can be connected to a digital phone line.

Unlike existing analogue phone lines, digital lines don't work if the mains power fails – this can be an issue for applications that need guaranteed connectivity, such as fire panels, telecare alarms, and lift lines.

There are also benefits. The move to digital phone lines provides a good opportunity for organisations to review, rationalise and update their telephony arrangements.

Digital services offer the potential for cost savings and can better support organisations to communicate internally and with their customers.

When is this happening?

The switch-off is already underway and will be completed by the end of 2025.

The date when a line will be moved to digital is difficult to predict as it is dependent on a range of factors.

Most phone services in the UK are delivered over the Openreach network. As of 05 September 2023 Openreach has a national 'stop sell' in place for analogue telephone services. This means that no new analogue services will be provided by Openreach. Existing analogue telephony services will continue to operate until your telephony provider requires you to move to digital.

Note that the stop sell may mean that you are unable to make changes to your phone line such as adding channels to an ISDN or adding broadband to a line. You will also be unable to swap telephone provider - which is likely to be an issue if your existing contract arrangements end before 2025.

Stop sells also impact the availability of other copper-based telephony and broadband services further details on this are provided in Section 3.

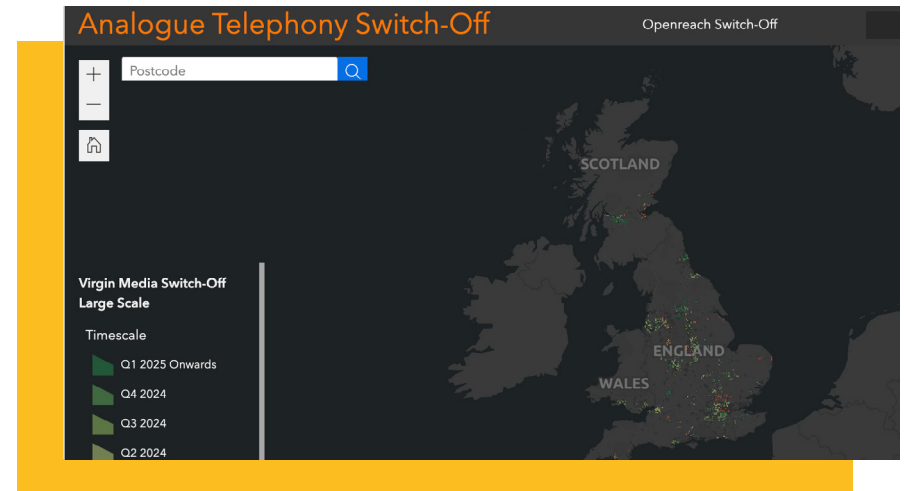
Other telephone network providers are also decommissioning their analogue networks to the same timescales. FarrPoint has mapped the switch off dates provided by Virgin Media - these dates are different from those provided by BT as they relate to the date when all existing analogue services in an area will have been moved to digital. Link to map: farrpoint.com/connectivity-changes-map

However, this is only part of the picture, there are 600+ telecom providers in the UK and each has their own process, plans and timescales for moving their customers to digital. Many moves to digital telephony are triggered by a customer's broadband or television contract being renewed or upgraded. This means that the rollout of digital telephony is not being completed geographically (as the move to digital TV was), instead digital phone lines are being installed across the country. Some customers identified as potentially vulnerable are being left until later in the migration process - this includes customers who: use telecare, are over 70, only use landlines (ie no mobile phone), have no mobile signal, or have told their provider that they have additional needs.



Helpful links

- www.farrpoint.com/news/switch-off-webinar
- www.attoday.co.uk/guest-article-what-the-analogue-switch-off-means-for-telecare/
- www.openreach.com/upgrading-the-UK-to-digital-phone-lines
- <https://www.virginmediabusiness.co.uk/VMBD/Awareness/analogue-switch-off/The-big-analogue-switch-off-is-underway/>
- <https://www.techuk.org/accelerating-innovation/digital-phone-switchover.html>





2. Mobile Network Sunsetting: 2G and 3G

2. MOBILE NETWORK SUNSETTING: 2G AND 3G

What's happening?

In addition to the changes to the UK's fixed line network, the mobile networks are also changing. There are plans to decommission ("sunset") the older 2G and 3G networks.

How will this impact me?

Older equipment that connects to mobile networks may only support 2G or 3G. These devices will need to be replaced when these networks are decommissioned.

As well as mobile telephones, other equipment could currently connect to mobile networks. This includes a similar range of equipment as listed above: fire and security alarms, remote monitoring, traffic lights, telecare alarms, etc.

When is this happening?

3G networks will be the first to be decommissioned. Vodafone and EE have announced 2023 shutdown dates for 3G, Three has announced a 2024 shutdown. The remaining network, O2, had not announced a date at the time of writing.

Although it is older than 3G, 2G will remain operational for longer. This is due to the large number of devices that use 2G that will remain in use for a long period, examples include Smart Meters and the eCall system fitted to all new cars in Europe. Although no fixed dates have been announced by network providers, it is expected that 2G will remain operational for another decade.¹

Network providers continue to invest in both 4G and 5G networks meaning that the coverage and capacity these networks offer will continue to increase.

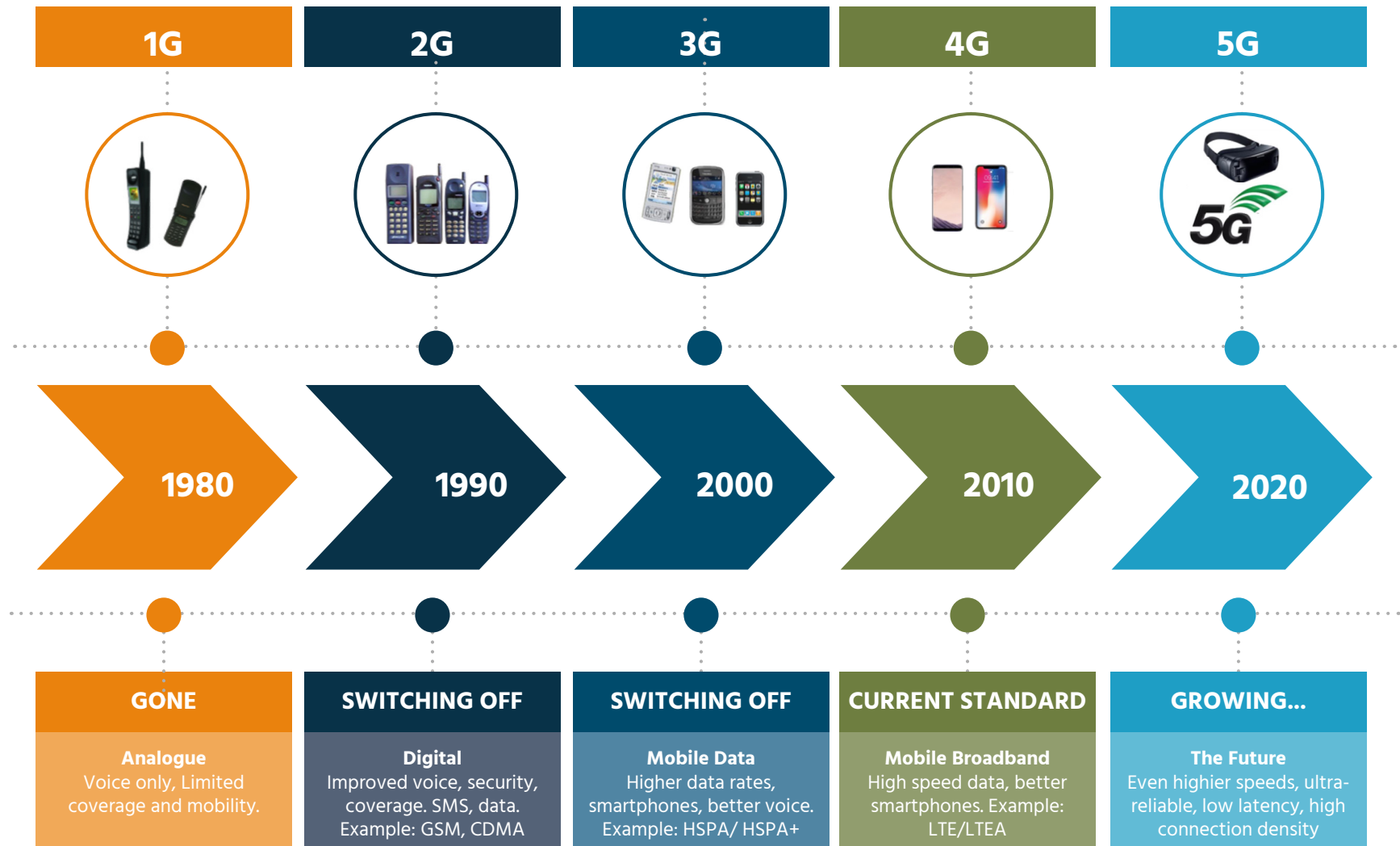


Helpful links

- <https://www.vodafone.co.uk/help-and-information/3g-switch-off>
- <https://www.three.co.uk/support/network-and-coverage/our-plans-to-switch-off-3g>
- <https://newsroom.bt.com/ee-to-offer-5g-solutions-across-the-entire-uk-as-bt-group-unveil-new-mobile-and-convergence-ambitions/>

¹ Ofcom, 2023: <https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/advice/3g-switch-off>

Generations of Mobile





3. Copper switch-off

3. COPPER SWITCH-OFF

What's happening?

Sometimes the terms analogue switch-off and copper switch-off are used interchangeably – but this is not correct, the copper switch-off is a different programme of work and is the next step in the UK's move to a full fibre digital network.

While the analogue switch-off will see every premise in the UK move to digital phone lines by 2025, many of these lines will still be delivered over existing copper connections.

The copper switch-off will see these copper lines being replaced with fibre, providing higher levels of capacity and reliability.

How will this impact me?

Fibre will need to be installed into all premises that currently only have copper.

Some broadband connections are delivered over copper connections, examples include DSL and FTTC (two broadband technologies used commonly by residential and business users). These services will all need to be replaced with a fibre alternative.

Numerous businesses across the UK rely on the network connections that are supplied via copper cables. From local authorities, GP surgeries and care homes to pharmacies and hundreds of thousands of retail shops, all will have to switch to fibre or mobile over the coming years. It sounds far away, but changes are already happening.

If you run a small retail shop, you might experience minimal disruption. Your till, your card machine or terminal would not work during the switch but are likely to be up and running smoothly afterwards.

It gets a little more complex if you are a larger organisation with different branches across multiple locations. Knowing which of your sites rely on copper-based services and what fibre-based alternatives you should be using is really important.

When is it happening?

From local authorities, GP surgeries and care homes to pharmacies and hundreds of thousands of retail shops, all will have to switch to fibre or mobile. BT stop sell dates provide an indication of when the copper switch-off may impact you. A national stop sell is in place for analogue telephony services - however, stop sell dates also relate to BT's full fibre rollout. If your exchange area has a stop sell date in effect then you may be unable to obtain new copper based services. Existing copper based services will continue to operate until your provider decides to migrate you to an alternative service. However, you may find that the stop sell means you are unable to make changes to your existing service or switch to another provider. This is likely to impact you when your existing contract arrangements come to an end.

FarrPoint's **connectivity changes maps** show the exchange areas where stop sell dates have been announced by Openreach.

Helpful links

- www.farrpoint.com/news/copper-switch-off

**Who are FarrPoint and
how can we help?**



ABOUT FARRPOINT

We are not your typical consultants. FarrPoint is an independent connectivity and smart technology consultancy. We provide advice on regional connectivity, network infrastructure, 4G and 5G, smart places, IoT, TEC and enterprise IT.

We are a friendly team of consulting technologists, economists and data scientists. We make sure that our work is grounded in well-defined business requirements and use cases. We never present a strategic vision without a clear plan of action to turn that vision into reality.

HOW CAN FARRPOINT HELP YOU PREPARE FOR THE SWITCH-OFFS?

There is not a one-size-fits-all approach to the switch-offs as each organisation has unique needs. Businesses need to determine what is their best approach and think about how alternative technologies can help prevent any issues occurring as a result of the switch-offs and make the most of these changes and the benefits they could bring.

This is where FarrPoint can help! We apply our hard-earned experience to develop solutions that will work in the real world. Our consultants have extensive experience and specialise in a variety of different service areas including enterprise IT, digital telecare, smart places and mobile offerings. We will partner you with the best team of FarrPoint consultants to help you develop a plan which outlines the best steps to take for you and your business as you prepare for the switch-offs.



GET IN TOUCH

Get in touch with us to discuss how we could help you find the most suitable solution.

- farrpoint.com/contact-us •
- contact@farrpoint.com •

**EDINBURGH**

Exchange Place 2
5 Sempie Street
Edinburgh
EH3 8BL

[+44\(0\)131 202 6018](tel:+44(0)1312026018)

LONDON

1st Floor
99 Bishopgate
London
EC2M 3XD

[+44\(0\)203 693 7310](tel:+44(0)2036937310)

MANCHESTER

3 Hardman Square
Spinningfields
Manchester
M3 3EB

[+44\(0\)161 669 5821](tel:+44(0)1616695821)

NOVA SCOTIA, CANADA

1300-1969
Upper Water Street, Halifax
Nova Scotia, Canada
M3 3EB NS B3J 3R7

[+19025001414](tel:+19025001414)