openreach

UK's digital transformation: Moving from line-based phone networks to internet-based networks

Frequently Asked Questions

March 2019

In May 2018 Openreach launched a consultation with its Communications Provider (CP) customers and industry groups about the move from analogue telephony to digital voice services. The consultation, which ran for ten weeks and closed on 27 July 2018, was announced after its supplier, BT Group signaled plans to close its traditional telephone network (the PSTN) and migrate all customers to new digital, internet based (all-IP) services by December 2025.

The PSTN supports a number of Openreach wholesale products including: Wholesale Line Rental (WLR3), Integrated Services Digital Network (ISDN 2 and ISDN 30), Local Loop Unbundling Shared Metallic Path Facility (LLU SMPF) and Sub-Loop Unbundling Shared Metallic Path Facility (SLU SMPF), Narrowband Line Share and Classic products.   When the PSTN is switched off these products will no longer be available.

We're working with our Communications Provider customers to move to alternative products by 2025 and wider industry to communicate the changes.

Here are some frequently asked questions and answers to help your understanding of the WLR withdrawal process.

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Section 1 - Background and overview

1.1 Why are you withdrawing WLR?
Openreach has been informed by its supplier (BT Group) that it intends to upgrade all of its customers from analogue (PSTN) to digital (all IP) telephone services by 2025.

The reality is that the equipment which runs the PSTN is ageing. Spare parts are becoming out of manufacture and, additionally, many of the people who designed, built and operated the system are retired or close to retirement so skills are increasingly scarce.

The PSTN supports a number of Openreach products: WLR3 analogue, ISDN 2, ISDN 30, LLU SMPF, SLU SMPF, Narrowband Line Share and Classic products. These products are generically referred to, as part of the industry engagement programme, as WLR products. When the PSTN closes, these products will no longer be available.

1.2 Is Ofcom involved? What do they think about this?
We are in regular contact with Ofcom and the Office of the Telecommunications Adjudicator (OTA2) about the withdrawal of WLR and related products and have shared our plans with them.

You'd need to ask Ofcom what their views are but they are working with industry to make sure that any changes which impact end customers are addressed.

1.3 Does this mean you're closing the PSTN?
BT has stated its intention for all of its voice customers to be using digital IP voice services by 2025. Today, some voice services are provided using analogue technologies referred to as the PSTN. When the PSTN closes in 2025 these analogue voice and data services will no longer be available.

1.4 What exactly is the PSTN?
The PSTN allows calls to be made all over the world using analogue voice data. It consists of copper telephone lines, fibre optic cables, microwave transmission links, satellites, undersea telephone cables and mobile networks.

The PSTN has evolved from a network of fixed-line analogue telephone systems to an almost entirely digital network. Whilst the PSTN requires physical lines, IP telephony is all digital and requires nothing more than the internet to be fully operational.

The reality is that the equipment which runs the PSTN is ageing and will reach its end of life by December 2025. This means the analogue telephone voice services that are reliant on this network will no longer be available.

1.5 What is the ISDN?
The ISDN (Integrated Services Digital Network) has been designed for the digital transmission of data and voice over ordinary copper wires and relies on the PSTN to work.

Section 2 - Impacted products

2.1 Which products are affected?
The PSTN supports a number of Openreach products: WLR3 analogue, ISDN2, ISDN30, LLU SMPF, SLU SMPF, Narrowband Line Share and Classic products. These products are generically referred to, as part of the industry programme, as WLR products. When the analogue network closes in 2025 these products will no longer be available.

2.2 Can you explain what these analogue services are and what they do?

Wholesale Line Rental (WLR) enables CPs to offer their own-brand telephony service over the analogue network.

Openreach provides, maintains and repairs the lines so that CPs can supply services to their customers, without having to maintain a network themselves.

Integrated Services Digital Network (ISDN) is a telephone-based network system that transmits voice and data over copper wires. ISDN enables customers to make phone calls while transmitting files and videoconferencing. There are two types of ISDN: ISDN2 and ISDN30.

ISDN2 comes in two variants; ISDN Standard and ISDN System and can deliver two simultaneous 64kbps connections over a single line. ISDN30 offers speeds of 64kbps over up to 30 channels per bearer.

Local Loop Unbundling Shared Metallic Path Facility (LLU SMPF) enables CPs to offer broadband services over an analogue line while another CP (or the same CP) supplies voice services on the same line – hence it being "shared".

Sub-Loop Unbundling Shared Metallic Path Facility (SLU SMPF) provides access (via an access point) to the local network (usually the Openreach street cabinet) to enable SLU CPs to connect to their Fibre network, providing voice services over copper and broadband over fibre.

Section 3 - WLR withdrawal timeline

3.1 How much of a notice period does Openreach have to give when withdrawing products?
In the case of WLR, we gave an initial five year notification (briefing ref GEN073/18) of intent to stop selling analogue network based products and services, followed by a period of around two years for subsequent migrations and complete withdrawal of the product.
We'll work collaboratively with CPs to ensure the process of withdrawal is managed in the best possible way to ensure a smooth transition and minimal disruption to end customer service.

3.2 What is the WLR withdrawal timeline?

November 2017	BT announced its intention to close the PSTN in 2025
May 2018	Openreach consultation on WLR withdrawal launched
July 2018	Openreach consultation closed
December 2018	Formal notification to stop selling products to be withdrawn (Gen073/18)
May 2019	SOGEA/SOGfast planned Early Market Deployment Launch
March 2020	Target date for SOTAP to commence trials
December 2020	Five year reminder that WLR is being withdrawn
September 2023	Stop selling new supply of WLR PSTN, ISDN2 and ISDN30
April 2025	Orphaned assets phase
December 2025	WLR withdrawn

3.3 Will this leave CPs with planned and orphaned assets?
Openreach has provided CPs with a significant notice period of withdrawing the WLR product. This allows CPs time to plan end customer migrations. Openreach is currently working with industry through the working groups to define a process to manage any orphaned end customers.

Section – 4 Migrations

4.1 How many lines will be affected by your WLR withdrawal?
Over 16 million lines and channels, which are onward sold by over 400 CPs, will need to migrate before the PSTN is closed in 2025.

4.2 Will there be a geographical withdrawal of service?
We plan to consult on the trial of the WLR switch off and, as part of that consultation, we will explore geographical withdrawal of services.

4.3 When will you start to force-migrate end customers?
We're currently working with industry through the working groups to define a process to manage orphaned assets. Once this process has been defined more information will be made available.

4.4 Can lines migrate back from GEA-FTTC and MPF to WLR3 during this switch off period?
Yes, this order journey will be supported until new supply is withdrawn from the contract in September 2023. The order journey however may be slightly different to achieve this from the existing transfer process.

4.5 Can customers be migrated in bulk?
Openreach is currently considering a solution that will enable CPs to 'bulk migrate' their copper lines to either GEA-FTTC or SOGEA.
Very simply, CPs will send a file(s) of lines for Openreach to schedule the appointments as required. The schedule will be passed back to the CP so they can place the orders against the reserved appointments if applicable using the individual reference keys provided. The commercials for this are currently being considered in parallel.

4.6 Will CPs need to submit a migration plan?
It's important that we have early engagement of CPs to understand their migration options, which will then be used to start building individual CP migration plans. CPs should contact their sales and relationship manager now about migrating from WLR to IP services. If you don't know who this is please contact matt.dexter@openreach.co.uk.

Section 5 - Openreach alternative copper and fibre products

5.1 What products are available for CPs to choose from when migrating their analogue services?
There are a number of Openreach alternative access products to underpin PSTN migration. These include:

Single Order Transitional Access Product (SOTAP)
Single Order Generic Ethernet Access (SOGEA)
Single Order Gfast (SOGfast)
Fibre to the Cabinet (GEA-FTTC)
Fibre to the Premises (GEA-FTTP)
Ethernet
Metallic Path Facility (MPF)

These may require a 'number porting activity' where number retention is required when migrating away from the WLR product.

5.2 Can you explain what these alternative copper and fibre services – SOGEA, SOGfast, MPF, SOTAP Ethernet - are and what they do?

Single Order Transitional Access Product (SOTAP) is a new product that will deliver a copper path between the end customer's premises and the SOTAP CPs exchange infrastructure, over which the SOTAP CP can provide broadband and IP voice services. This is different from MPF because it facilitates the use of existing exchange infrastructure which

currently supports LLU SMPF and therefore provides a better experience for end customers migrating away from WLR products (with or without SMPF).

Single Order GEA (SOGEA) will offer similar connectivity to GEA-FTTC without the need for an underlying voice access product, offering speeds up to 80Mbps.

Single Order Gfast (SOGfast) is a cutting edge technology that allows us to deliver ultrafast speeds over existing copper lines of up to 330Mbps, through a single order variant which forms part of the Openreach developing product portfolio.

Fibre to the Cabinet (FTTC) is a form of fibre optic communication delivery in which the optical fibre runs all the way from the exchange to the street cabinet and uses the existing copper network to reach the home or office.

The remaining part of the access network from the cabinet to the customer is usually copper wire but could use other technologies, such as wireless.

Fibre to the Premises (GEA-FTTP) already enables CPs to offer ultrafast broadband speeds of up to 1Gbps download and 220Mbps upload and can be purchased on its own.

Metallic Path facility (MPF) allows CPs to provide phone and broadband services to their customers over the Openreach network. MPF is not affected by the withdrawal of WLR products as traffic is managed through the CPs own core network rather than the PSTN.

Ethernet offers a wide choice of high bandwidth, permanently connected, point-to-point services designed to help CPs extend their own networks and deliver a range of high quality services to their customers. The Ethernet fibre network that underpins them offers unrivalled geographic coverage of the UK, embracing many out-of-town locations where manufacturing takes place and where many data centres of the future will be located.

5.3 What's the alternative for end customers in areas with no fibre availability?
There are a number of options, including utilising the new Single Order Transitional Access Product (SOTAP) which uses broadband rather than voice as the primary service, as well as mobile and Ethernet services.

5.4 Will CPs need to invest in developing new systems in order to consume fibre services and the new SOTAP product?
Yes, CPs may need to develop or upgrade their systems to consume new products.

5.5 What is Openreach doing to meet the 10Mbps planned broadband USO, even if I only order a voice service?
Openreach is committed to supporting BT Group's obligation to deliver the Broadband USO that Ofcom will implement – giving everyone in the UK the legal right to an affordable broadband connection of at least 10Mbps, from a designated provider. How this commitment is delivered is not yet certain and there could be a number of solutions to meet this requirement.

5.6 What about those unable to get reliable broadband today or who are suffering slow speeds? How will their voice service be provided in the future?
Ofcom is working on a broadband USO which should ensure every home can reasonably request broadband with minimum speeds of at least 10Mbps which will be able to support voice as well. We're fully supportive of the Government's USO and will work closely with them, Ofcom and industry to develop it.

We continue our BDUK work to build fibre into more remote areas, which will bring it closer to people in not-spots, and make it more feasible and cost-effective to deliver FTTP on demand.

In addition, we will always strive to offer a solution through our very successful Community Fibre Partnership scheme. We're currently working on around 800 Community Fibre Partnerships nationally, through which the community helps co-fund a broadband upgrade with Openreach.. Grants may be available, though some communities have crowd-funded their share of investment.

Section 6 - Pricing

6.1 Will these fibre products result in cheaper or more expensive wholesale prices for CPs?
We'll announce our pricing in due course. As always, we'll notify our CP customers in advance.

6.2 How will SOTAP be priced?
It's too early to say at the moment. The commercials will develop once we know what the product will look like.

Section 7 - Digital (all IP) telephone services and what it means for end customers

7.1 What happens if end customers have WLR from one CP and broadband from a different CP?
The end customer has a choice. CPs should advise their end customers of the options available.

7.2 What are you going to do about voice only customers who don't want broadband?
The number of customers that require a voice only service is declining, as broadband becomes more important to everyday life.

Openreach is investing in future fibre products to support an all IP future and does not propose to offer a voice services post December 2025.

The introduction of the SOTAP product will ensure that end customers that cannot get fibre (coverage) can access an ADSL broadband service over which voice can be provided. CPs that buy the Openreach MPF service and provide voice only services to end customers will not be impacted by WLR withdrawal.

7.3 What happens to payphone lines?
Any services provided over WLR will need to be migrated to a digital IP service before December 2025 to stay connected. Post December 2025 services provided over WLR will no longer be available.

7.4 For existing WLR lines that have features and mailboxes, will saved messages be lost?
Calling and network features will be down to the individual wholesalers supplying the IP voice service to determine what features are offered and whether existing features can be mapped.

7.5 If end customers move service, will they be able to keep their telephone number?
Yes. Openreach expects that end customers transitioning to alternative products will be able to keep their telephone numbers via the existing number portability processes.

7.6 How will CP customers benefit from this change?
IP voice products offer a digital quality line as standard and a better overall experience such as simplified ordering and install. We're looking to offer a wider choice of appointment times with customers for installation and more next day appointments and instantaneous provisions for certain orders.

We believe that a single simplified digital service will provide operational and service efficiencies which will translate into commercial benefits for those adopting the services.

7.7 Will lines to Critical National Infrastructure (CNI) organisations and lines with special services be affected?
Yes. There are a number of lines to CNI organisations and lines with special services that work over a WLR service, for example:

- CNI – e,g UK water authorities, Electric and Gas suppliers, 999 services etc.
- Alarm services
- Telemetry monitoring devices
- Health pendants
- Payphone lines

Openreach is encouraging the CNI organisations and special services providers to engage with their CPs to test their line configurations and equipment against the new product offerings

7.8 What happens to suppliers of alarm signalling services?
This is ultimately a question for the CP or service providers, providing an over the top service.

We're clear that any services provided over WLR will need to be migrated to an alternative product. We would expect the existing CPs to advise their end customers of the options available to them.

7.9 What about customers deemed to be vulnerable?
CPs managing the relationship with the end customer will need to make sure the needs of their end customer are met. Openreach will work closely with CPs to provide the required level of service to make sure the transition is managed in the best way possible.

7.10 Do you plan on testing solutions before any migration?
We're currently reviewing options to provide a test lab to all CPs to test their solutions end to end in advance of any migrations.

Section 8 - Customer communication

8.1 What customer communications have already taken place?
Openreach launched an industry consultation on Upgrading the Access Network. The consultation opened on 15 May 2018 and closed on 27 July 2018. A summary of responses is available on the Openreach website. We also held a series of events throughout May at venues in London, Birmingham, Leeds and Edinburgh as part of the consultation process. We're committed to follow-up sessions and hold bi-monthly working group sessions with Ofcom and industry to discuss key topics. The schedule of upcoming sessions is available on the Openreach website. Please note that you'll need your Openreach portal ID and password.
We're also working closely with CPs to ensure that appropriate end customer communications are supported. All the reference material can be found on our WLR withdrawal dedicated web page.

8.2 What did your consultation period cover?
Our consultation period covered the process and timeline for the withdrawal of wholesale products and services that run over the traditional analogue telephone network – which is due to close in 2025 - and the introduction of Single Order Transitional Access Product – SOTAP – which will enable consumers and businesses that are currently connected via traditional copper lines to order a pure broadband service which doesn't rely on the analogue PSTN platform.

8.3 What communications are you planning?
Regular updates will continue to be provided via our Openreach website, quarterly newsletter and bi monthly working group sessions with Ofcom and industry.

Section 9 – Communication material

9.1 What documentation/support collateral is available to use with end customers?
Openreach will work closely with CPs, Ofcom and the government (DCMS) to ensure that appropriate end customer communications are supported. These include:

• Video animation – The Openreach story
• Infographic
• FAQs
• Quarterly newsletter

We have no intention of marketing end customers directly. We do intend, however, on using our website and Customer Information Zone to keep CPs apprised of the key milestone dates, and to state the Openreach position.

Section 10 - Openreach post 2025

10.1 What will the network look like post 2025?
Our vision is to create a single simplified digital network, creating fewer points of intervention and failure.
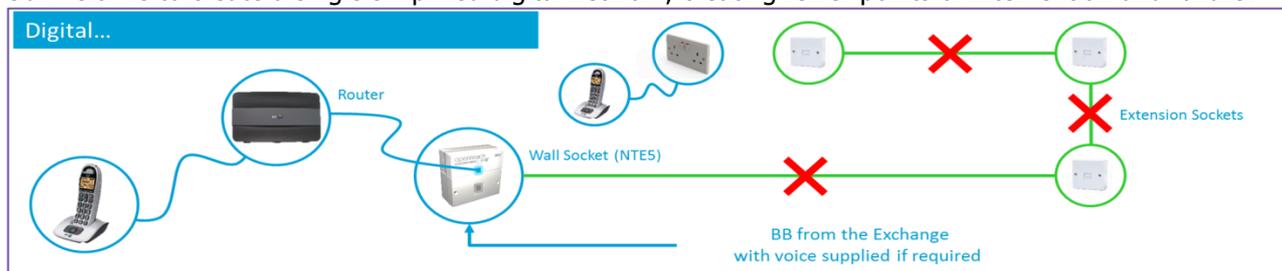
Glossary

Access network
The part of the network that connects directly to customers from the local telephone exchange.

Analogue telephone service
An analogue telephone service allows traditional voice communication via telephones connected to the telephone line at the wall socket in the home.

Backhaul
The part of the communications network that connects the local exchange to the CPs core network.

Bandwidth
The measure of the maximum capacity of a data link in the network.

Broadband
A data service or connection that enables a user to connect to the internet. Generally defined as being 'always on' and providing a bandwidth greater than narrowband connections.

Internet Protocol (IP)
This is the packet data protocol used for routing and carrying data across the internet and similar networks.

Not-spot
An area which is not covered by fixed or mobile networks.