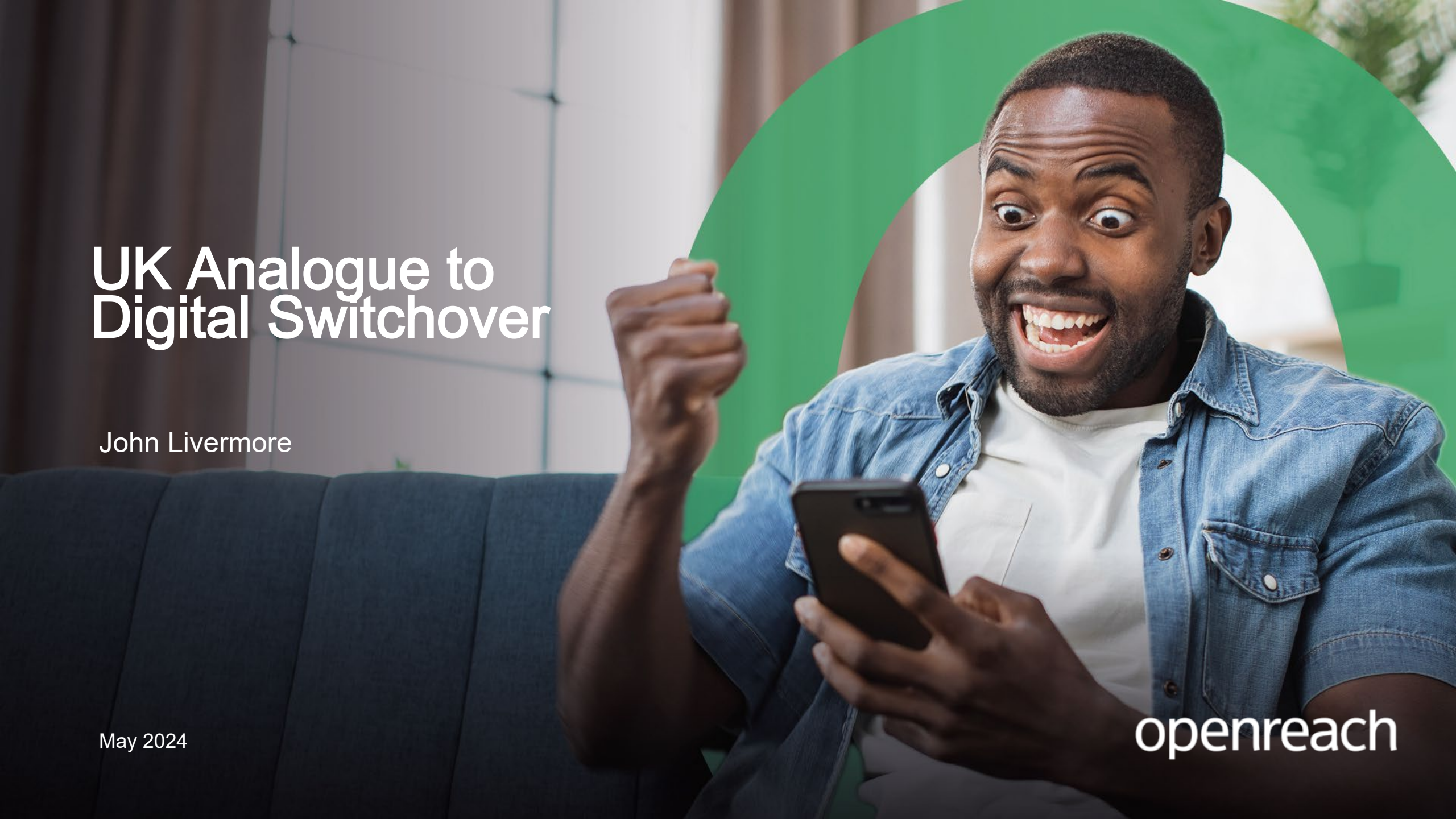


# UK Analogue to Digital Switchover

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May 2024

openreach



# Openreach

## A bit about us

We build and maintain the UK's largest wholesale communications network which provides phone, broadband, TV and data services to millions of homes, businesses and other organizations.

We're owned by the BT Group but we're legally separate and heavily regulated.

We work on behalf of Communications Providers like Sky, Vodafone, BT, TalkTalk, Zen and hundreds of smaller players.

Our engineers work in every community in the UK, around the clock, and in all kinds of weather to install and maintain equipment that provides fast, reliable broadband to millions of people.

We provide around 24.5m voice and broadband lines to homes and businesses in the UK.

We are upgrading the UK's broadband infrastructure to pass 25m homes and business with Full Fibre connections by 2026.

We are committed to a balanced build including over six million premises in rural and semi-rural areas.


# Openreach


↳ **Communications provider**


↓  
**End customer**

 **690+**  
Communications providers

 **35k+** employees

 Building Full Fibre to  
**25m** premises by Dec 2026

 **12.5m+** Full Fibre build complete  
(2.5m rural), building 66k a week

 **4.2m** end customers  
connected to Full Fibre

# The PSTN is becoming less reliable as time goes on

## Ofcom Connection Nations UK Report 2023

Equipment is beyond its intended lifespan and reduced skills in legacy technology



Since 2020, the fault rate on the copper network was 50% higher than on FTTP



In 2023 the number of PSTN incidents increased by 20%



In 2023 there was a 60% increase in hours lost for customers on the PSTN



*Over the last three years, for the two operators with fibre and copper access networks (KCOM and Openreach), the fault rate (per 1,000 connections) on KCOM's copper access network (ADSL) and Openreach's copper access networks (ADSL / VDSL) was around **50% higher** than the fault rate (per 1,000 connections) on their respective FTTP networks*

Source: Connected Nations Page 64

*The volume of fixed incidents, particularly relating to PSTN voice, has grown over a number of years due to the equipment being beyond its intended lifespan and reduced skills in this legacy area of technology. For instance, this year has seen a **20% increase in the number of PSTN incidents** reported to us, with a **60% increase in the amount of service hours being lost for customers**.*

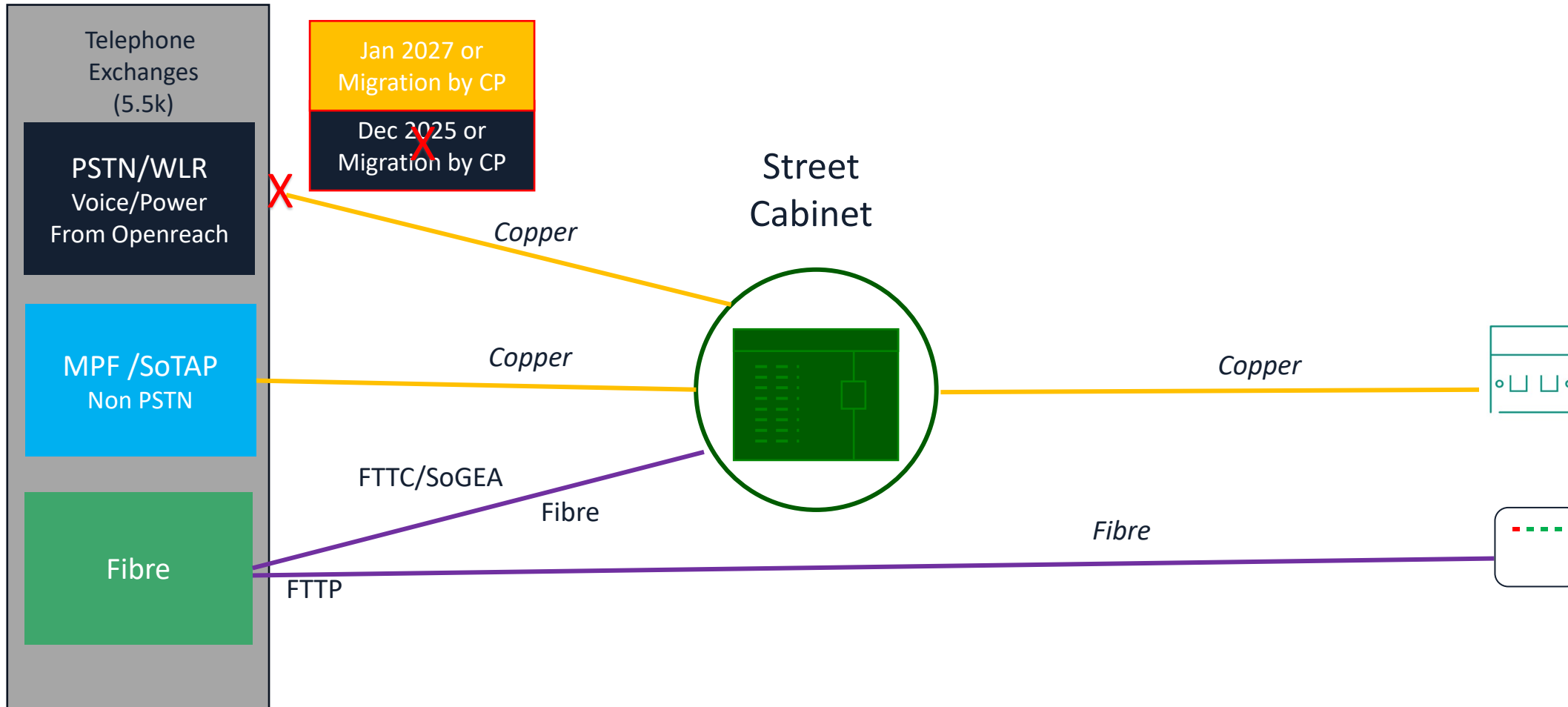
Source: Connected Nations Page 65

# What's changing?

## The Network-After

**Note-There will not be Exchange switch-over!**

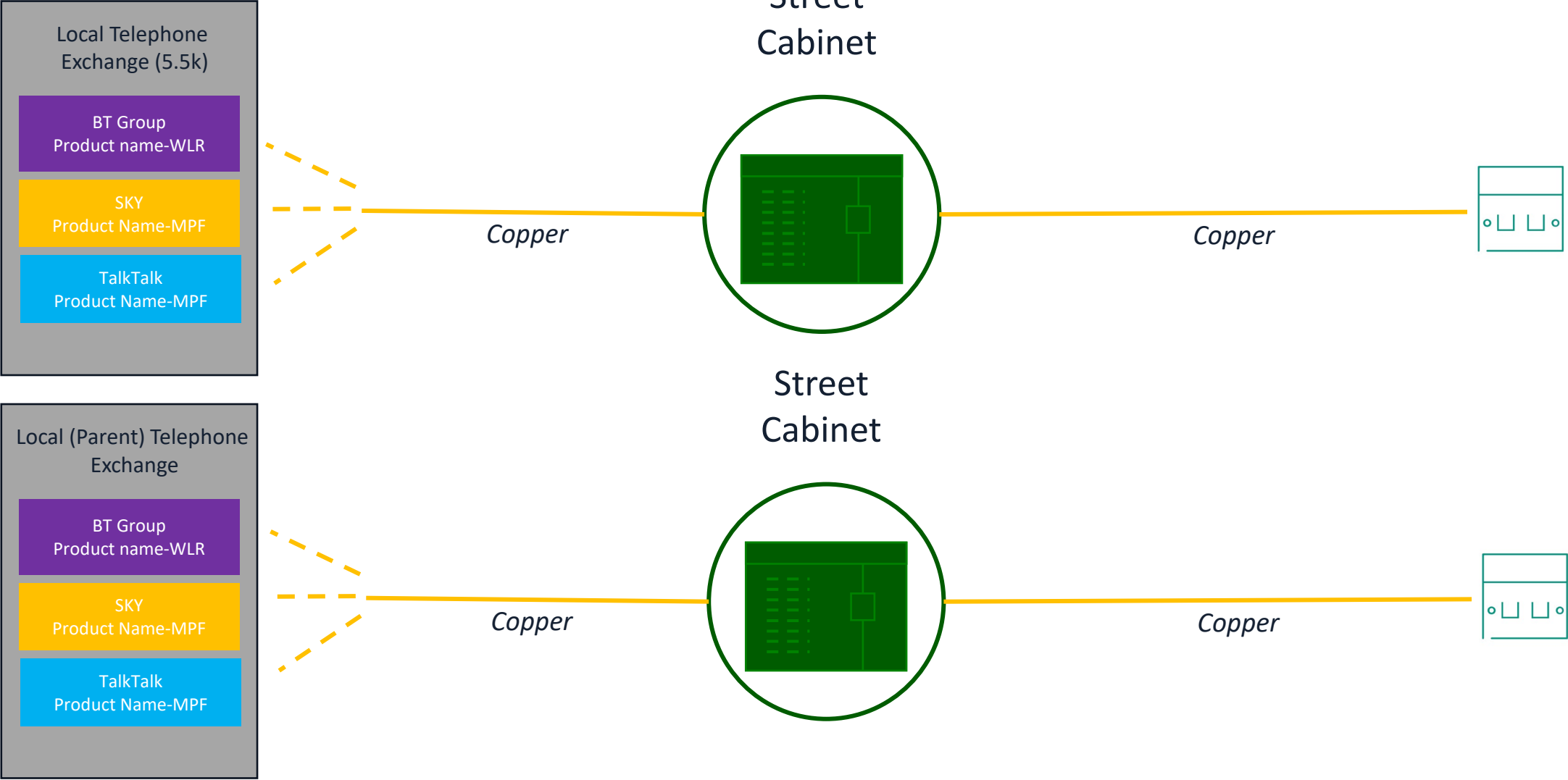
**Each CP will migrate their own customers when they are ready**



SoGEA is the name Openreach give to Fibre to the Cabinet, when its migrated by the CP and the link to the WLR equipment is withdrawn

# The Network

## Before Fibre

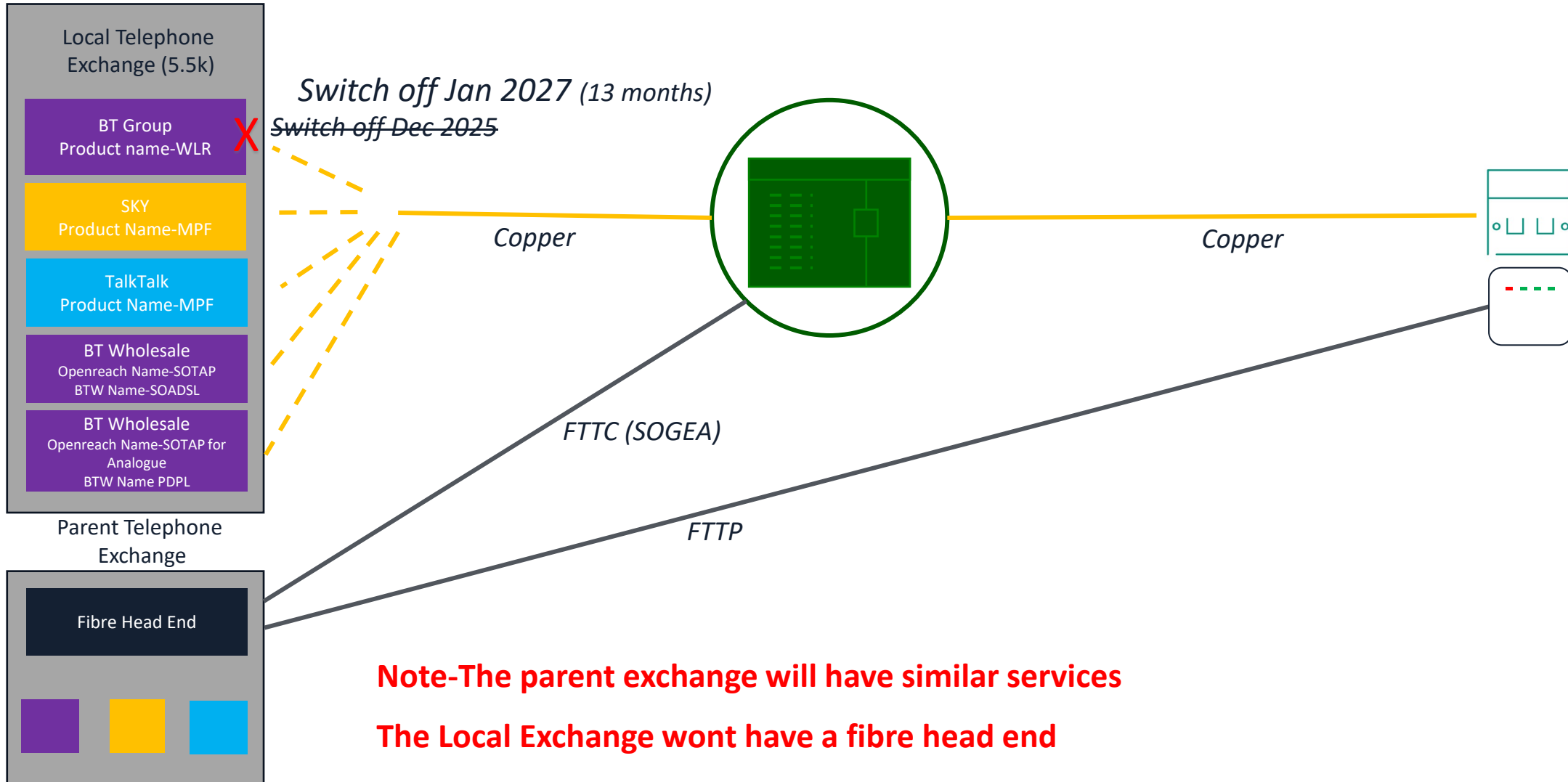


# The Network

## Fibre

**Note-There will not be Exchange switch-over!**

**Each CP will migrate their own customers when they are ready**

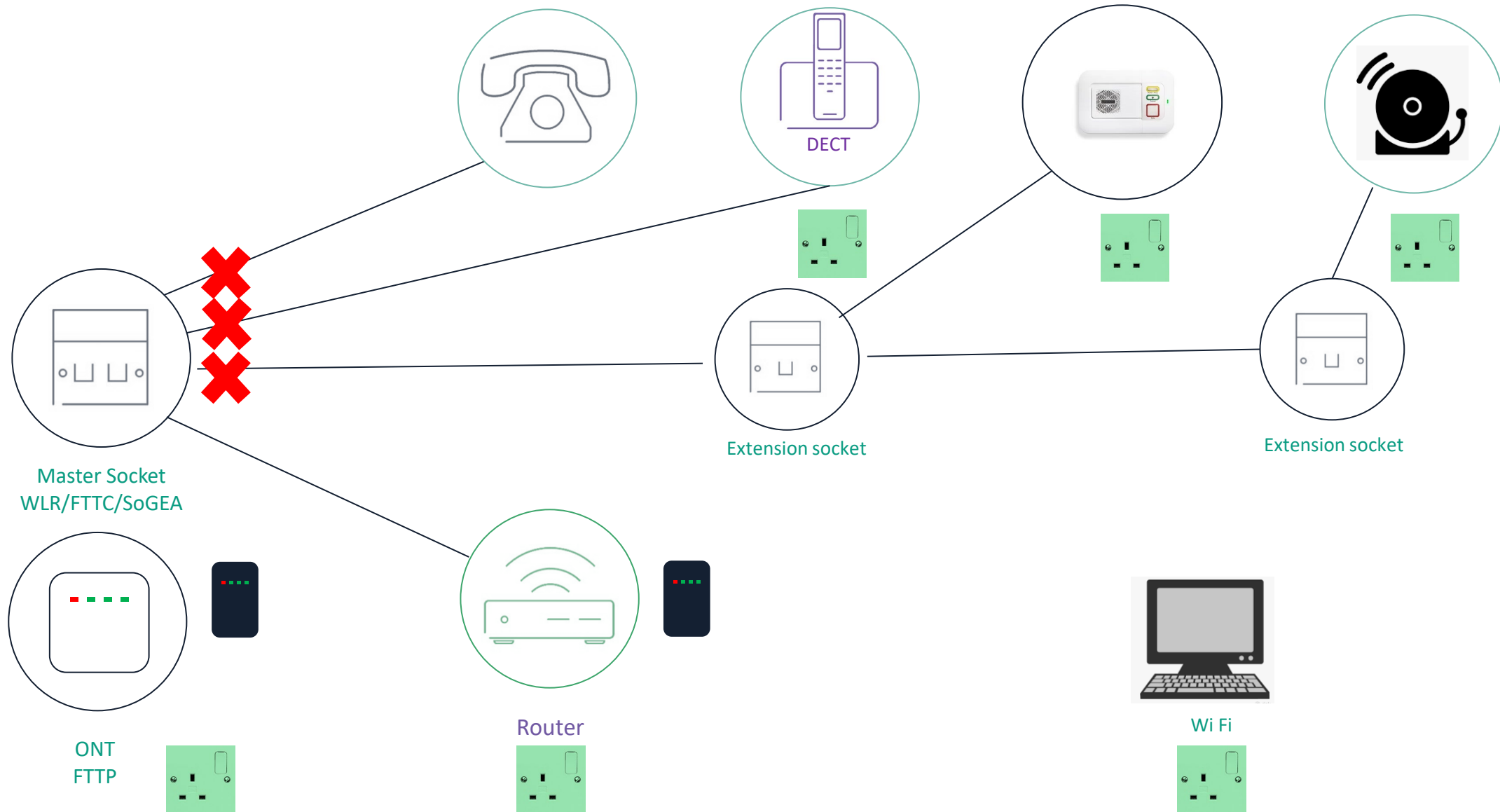


**Note-The parent exchange will have similar services**

**The Local Exchange wont have a fibre head end**

# So what's changing inside the premises ?

On Migration by CP to SoGEA (FTTC)/FTTP



# Use Cases

- Special Services (non-standard Phone use)



## Alarms

CCTV  
Door Entry Systems  
External Bells  
Fire Alarms  
Intruder/Security  
Lift Alarms



## Business

EPOS (Tills)  
Franking Machines  
Printers



## Entertainment

Arcade Machines  
National Lottery Terminals  
Vending Machines



## Finance

ATMs  
Chip and Pin Terminals  
Paypoint Machines  
Stock Market Systems

## Government

Custodial Tagging  
Helicopter Pads  
School Security  
Weather Monitoring



## Health

Baby Unit Alarms  
Blood Fridges  
Medical Equipment



## Monitoring

Air con units  
Electricity Telemetry  
Environment Agency Monitors  
Flood Monitors  
Gas Telemetry  
Sluice Gates  
Smart Meters  
Streetlights  
Water Telemetry



## Telephony

Emergency Phones (Coastal or Bridges)  
Fax Machines



## Travel

Bus Stops  
Car Park Barriers  
EV Charging  
Motorway Signs  
Pay and Display Machines  
Railway Level Crossings  
Traffic Lights  
Train Platform Help Points  
Underground (Oyster)



## Vulnerable

Telecare Alarms  
Telehealth Alarms (biometrics)





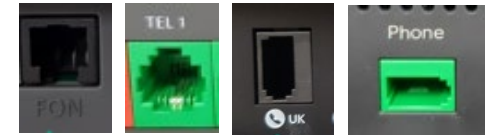
# How do I connect existing devices?

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All devices in the current installation will need to connect to a router supplied by their Communications Provider

There are 3 ways to connect a device to a router

1. Wi-Fi
2. Ethernet port
3. ATA port (where provided)



What is an Analogue Terminal Adapter port?

The ATA is a socket provided by SOME Communications Providers, which may be integrated into the back of the router or may present through a stand-alone device plugged into the Ethernet port on a Router

The ATA port must be “switched on” by the Communications Provider as part of the customers package

An ATA port can give very varied results and Openreach do not recommend the use of these for life saving devices

The ATA port is designed for Voice calls from phones not for sending **DTMF/STMF** tones which are machine to machine and can get lost in transmission, elongated or shortened. This could seriously affect the reliability of the devices plugged into them

# Learn to C.L.A.P.

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## Communications

- Who is likely to receive them?
- Will they understand it?

## Logistics

- Will they be able to make the changes?
- Will the router plug into the **master** socket easily?
- Will there be power available for the router/ONT?

## Adjustments

- Will the CP provide an ATA port?
- Will the existing devices plug into an ATA port?
- What are the risks?

## Power

- Is there power on-site?
- What will you do in a power cut situation (UPS/BBU)?

## How can you get ready?

### 1. Audit your own telephone estate records

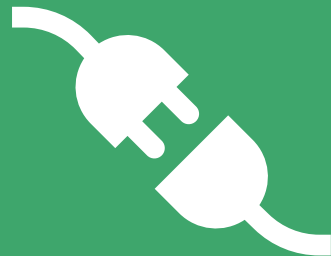
Check which devices you use today that are plugged into a main phone or extension socket. This could be a telephone, a system, a telecare device, or many other things

### 2. Contact your device providers

Ask them how the devices will work when plugged into a router (supplied by the CP). Do they have solutions to ensure your devices work when not using the PSTN

### 3. Contact your CP

Speak to your account manager or customer services, and ask their advice for your migration. They may have a specialist team or good information for you to read



# Taking extra care of the vulnerable

Recent government charters designed to protect our most vulnerable customers

We, as Communications Providers, commit to the following:

1. We will **not undertake any non-voluntary migrations** to digital landlines, until we have full confidence that we are taking all possible steps to protect vulnerable people through the migration process.
2. **No telecare users will be migrated to digital landline services without us, the customer, or the telecare company confirming that they have a compatible and functioning telecare solution in place.**
3. Where battery back-up solutions are provided, we will **work to provide solutions that go beyond the Ofcom minimum of 1 hour of continued, uninterrupted access to emergency services** in the event of a power outage.
4. We will collectively work with Ofcom and Government to create a **shared definition of 'vulnerable' customer groups that require greater support**, specific to the digital landline migration.
5. We will **conduct additional checks on customers who have already been non-voluntarily migrated to ensure they do not have telecare devices** we were unaware of, and if they do, ensure suitable support is provided.

We, as Network Operators, commit to the following to protect vulnerable customers through the migration from copper to digital landlines:

1. Before ceasing any analogue voice service, we will provide at least 12 months' notice to Communication Providers (CPs) and will discuss suitable migration options with CPs that will enable them to migrate customers in accordance with the December 2023 charter.
2. We will work with Ofcom, government, and CPs to create a shared definition of 'vulnerable' customer groups that require greater support, specific to the digital landline migration.
3. When we migrate customers to digital landline services, we will work with our ISP partners to check if they have a telecare device.
4. We will not migrate a known telecare customer to a digital landline service without the customer, the CP or the telecare company confirming to us that they have a compatible and functioning telecare solution in place that will work following the migration process.

## Summary

The Deadline for withdrawing services on the PSTN is December 2025.

Between now and then, all Communications Providers (Telephone/Broadband suppliers/ISP) using PSTN, must migrate all of their customers from old exchange equipment to the new digital fibre network

Customers may be contacted by their own CP, but can migrate anytime as the vast majority of alternative solutions are ready and available

Any Special Services (Telecare (Healthcare devices), Intruder, Fire or Lift alarms, telemetry (monitoring lines), fax etc) may need to connect to a router. Digital devices are recommended as analogue devices can be problematic

In the event of a power outage, the line will rely on the router and the internal Openreach equipment being powered and so the customer may need a Battery Backup Device

Openreach run a Digital Services Test Lab for Vendors of devices to test in an All IP environment. To date we have had 35 visits from 24 different vendors



Thank you

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