Quick Guide
Home wiring

The wiring that you install in your customer's properties is pivotal to their experience.

Your internal wiring installation options are shown below

Implications of locating the communication provider's (CP) router in a cupboard

It is important to note that the Wi-Fi service your customer receives is dependent upon the intended location of the CP router. Placing the router in a service cupboard or under stair cupboard will significantly reduce the speed and coverage your customer will receive.

It is highly recommended that if you position the router in this way that you provide additional RJ45 ports within the home.

Ideally for optimum speeds to be enjoyed using Wi-Fi it is recommended that you locate the router centrally within the property.

For information, advice and guidance around positioning, please refer to: PAS: 2016 Next Generation Access for new Build Homes Guide.

Please note

All internal wires and sockets beyond the ONT are the responsibility of the developer/future homeowner.

If any part of the single ended internal fibre cable (ezbend) is found to be damaged at commissioning, it is the developer's responsibility to replace it.

If the homeowner experiences a lack of service or poor service, due to a fault within the internal installation of wiring, which requires Openreach to rectify, the homeowner will be charged.
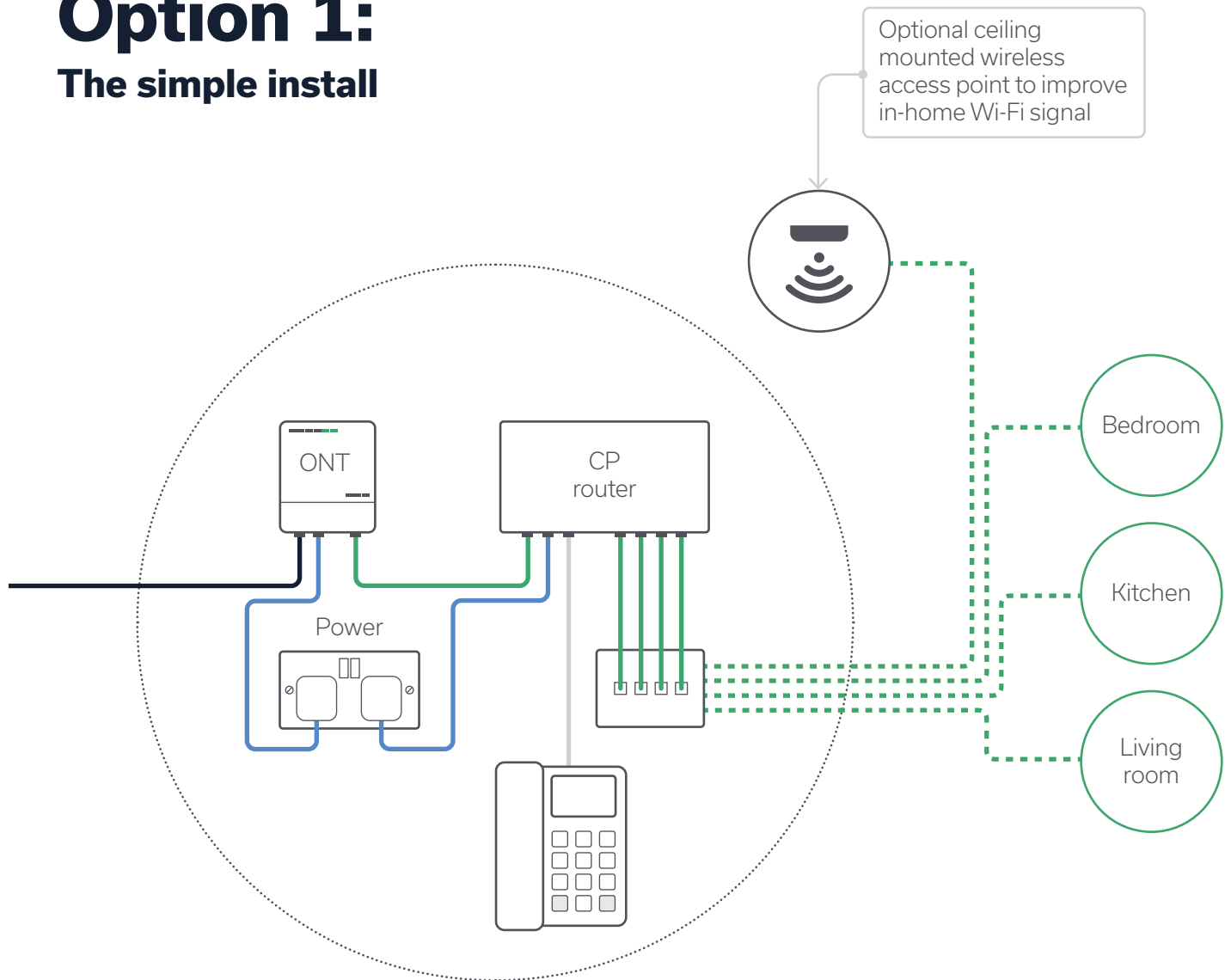
Please note

All installations of an Openreach ONT require at least 1 power socket to be installed/available in the same location.

An additional socket is recommended if not provided RJ45 network ports throughout the home, as this will be required by the CP router.

Option 1:
The simple install

Optional ceiling mounted wireless access point to improve in-home Wi-Fi signal

ONT

CP router

Power

Bedroom

Kitchen

Living room

The simplest installation involves the provision of the Openreach equipment (i.e. the ONT will be positioned adjacent to the outside wall) to which the customer then attaches the router, provided by their communications provider (CP).
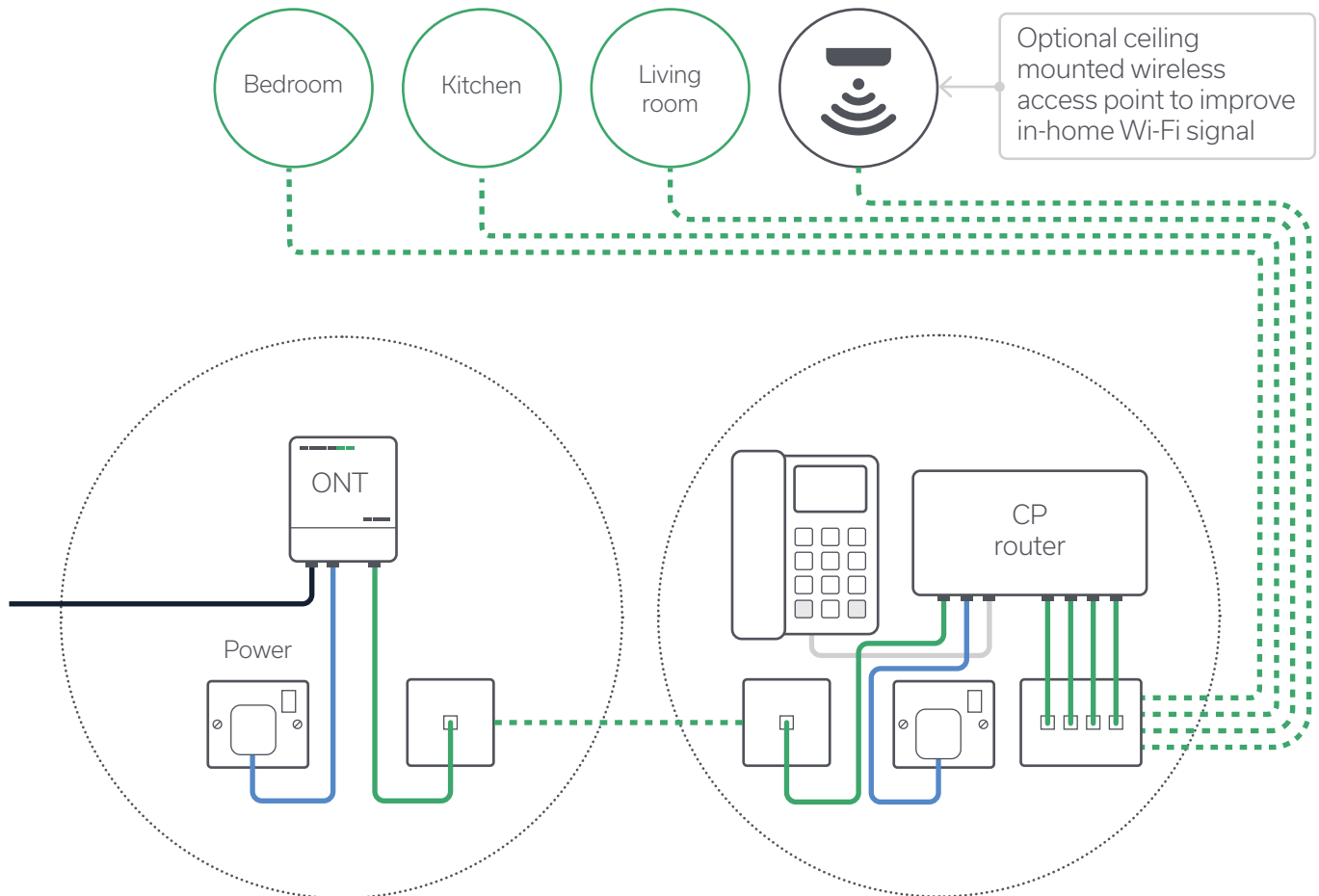
This installation limits the number of physical connections to the router and means the homeowner may not make the most of their FTTP connection due to the reliance on wireless connectivity.

Key

▬▬▬	Visible ethernet cable
▬▬▬	Single ended internal fibre cable (ezbend)
▬▬▬	Voice cable
▬▬▬	Power cable
▪ ▪ ▪	Behind wall ethernet cable
ONT	Optical Network Termination

Option 2:
Relocating the router via internal network cabling

Bedroom

Kitchen

Living room

Optional ceiling mounted wireless access point to improve in-home Wi-Fi signal

ONT

Power

CP router

Relocating the communications provider (CP) router provides a better quality wireless connection, as well as the ability to connect static devices such as TVs or games consoles physically. This allows these devices to take full advantage of the high speeds and bandwidth of a Full Fibre connection. Additional Cat6* cabling is required for this option from the ONT to the chosen relocation area. This connection should terminate in an RJ45 socket. A power socket should be provided for the CP router next to this socket.

*Cat6 is the preferred option to 'future proof' for modern devices

Key

────	Visible ethernet cable
────	Single ended internal fibre cable (ezbend)
────	Voice cable
────	Power cable
▪ ▪ ▪ ▪	Behind wall ethernet cable
ONT	Optical Network Termination

Option 3:
The networked home

Bedroom

Kitchen

Optional ceiling mounted wireless access point to improve in-home Wi-Fi signal

ONT

Home wiring – patch

Homeowner switch

CP router

Living room

Further to the second option, this setup cables back from the CP router position within the property to the under stairs/service cupboard position of the Openreach ONT for the location of a patch panel. This means that, as much as possible, any structured cabling is discreetly located out of sight.

A patch panel is the best option to intelligently connect multiple rooms with structured cabling. In this setup a customer could also install an ethernet bridge/switch to further create a truly networked home.

Key

▬▬▬ Visible ethernet cable
▬▬▬ Single ended internal fibre cable (ezbend)
▬▬▬ Voice cable
▬▬▬ Power cable
▪ ▪ ▪ Behind wall ethernet cable
ONT Optical Network Termination

Provision of the Openreach equipment

When Openreach installs the equipment we will install the ONT wherever the incoming fibre cable is located. Where you self-install the ONT, you will have control over when the equipment is installed. The ONT will remain the property of Openreach in both installation scenarios.

Where you are self-installing the Openreach equipment we will supply the ONT and the single ended internal fibre cable (ezbend) you need.

If you are installing the ONT opposite the cable entry hole, you will need to install a flush mounted single or double back box on the internal wall where the ONT is to be located.

The ONT will be installed at this location unless an alternative position has been agreed with your Field Based Co-ordinator (FBC) and the appropriate single ended internal fibre cable (ezbend) is run in a continuous fault-free length to the alternative position.

Please note

If single ended internal fibre cable (ezbend) is damaged by developers during installation then an internal Splice Point may be required to be fitted to complete installation. This will be undertaken at commissioning stage by Openreach.

Installation of internal cabling

Data cabling recommend

With the shift to full fibre networks, traditional analogue voice services are being phased out. A full fibre network transmits a digital or All IP signal rather than analogue.

In addition, the latest Openreach ONT variants no longer come with an integrated ATA (Analogue Telephone Adaptor). Some CPs may provide an ATA port on their router, but this is dependent on the individual CP and therefore Openreach cannot guarantee the availability. Therefore, we strongly recommend against installing traditional analogue voice cabling and extension sockets around your new build.

Instead, Openreach highly recommends substituting with data cabling. This gives the future homeowner the flexibility to use the extension for data or, by using their own customer procured ATA, traditional voice services.

It's worth noting that most CPs are recommending their customers use VOIP (Voice Over IP) equipment for voice calls rather than ATA's to convert the FTTP IP signal to analogue. Homeowners can contact their CPs to find out more about the options for voice services.