

# HBF Technical Conference 2023

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# Agenda

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- Virgin Media O2 - Network Expansion , Upgrades & Introducing NexFibre
- Future Technologies - XGS-PON; What is it?
- 1Gbps Capable? - Part R 'v' 1Gbps Available & Device Usage
- Current Build on your sites
- Future Build on your sites

# nexfibre & Virgin Media O2

*Expanding to even more homes, offering even more choice*



nexfibre is a joint venture between Liberty Global, Telefonica and InfraVia Capital Partners focused on fibre rollout.

Virgin Media O2 is both the build engine for this entity and a wholesale customer, with our broadband services already available over this network.

## Upgrading the Network

**It can handle everything we do today - and everything we do tomorrow, but we're still upgrading!**

**VM02 already connects to over 16 million homes via the Docsis Network (HFC)**

Our HFC network is now capable of delivering ultrafast 1Gbps speeds and beyond. This means that it's easily able to handle everything our customers need it to do today and for the foreseeable future.

## Future Network

**Full Fibre will provide even more bandwidth in the long-term, with symmetrical speeds!**

**Nexfibre has already begun rolling out targeting at least 5 million via XGS-PON**

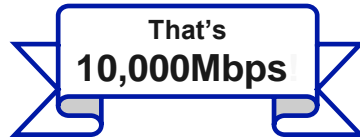
XGS-PON technology is capable of symmetrical upload and download speeds - so, in the future, customers will have the ability to upload as quickly as they download, with potential speeds of up to 10Gbps.

# XGS-PON: What is it?

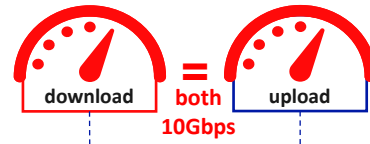
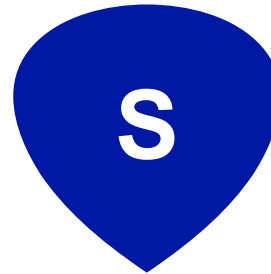
It's a new network technology that will enable us to deliver even **faster broadband** to our customers.



**10Gbps**



Ten times the capacity of VM's latest **Gig1** product



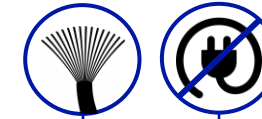
e.g. streaming a Netflix movie

e.g. backing up photos to the cloud

Current VM access networks support much **slower upload** speeds



**Passive Optical Network**



A PON network delivers data to the customers home using **only fibre optic** cabling. The fibre cable will come all the way to the customer's Hub (Router)

It's *passive* because it uses **unpowered** fibre optic splitters. These sit in street cabinets and split the signal to distribute it to customers



# 1Gbps Today – Part ‘R’

## Devices & Their Usage

Comparison with some current VM Broadband Products

Gig1

Download 1104Mbps  
Upload 52Mbps

M 350

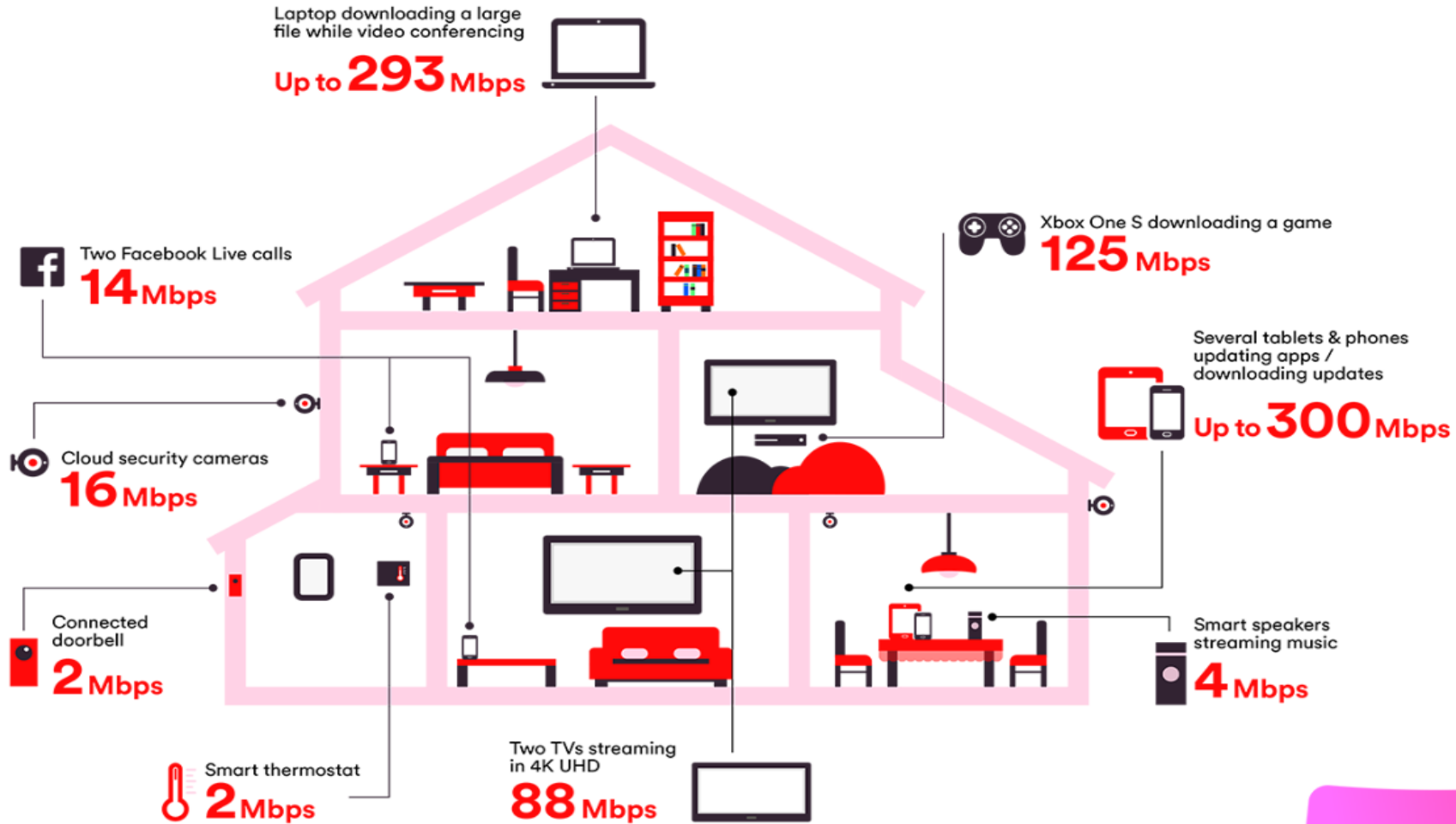
Download 362Mbps  
Upload 36Mbps

M 100

Download 108Mbps  
Upload 10Mbps

M 50

Download 54Mbps  
Upload 5Mbps



Device	Bandwidth demand (up to) in Mbps
Smart thermostat	2
Connected doorbell	2
Four cloud security cameras	16
Two Facebook live calls	14
Smart speaker streaming music	4
Xbox One S downloading a game	125
Several tablets and phones updating apps and downloading updates	300
Laptop downloading a large file while video conferencing	293
Two TVs streaming in 4K UHD	88
<b>Total in-home demand</b>	<b>Up to 844Mbps</b>

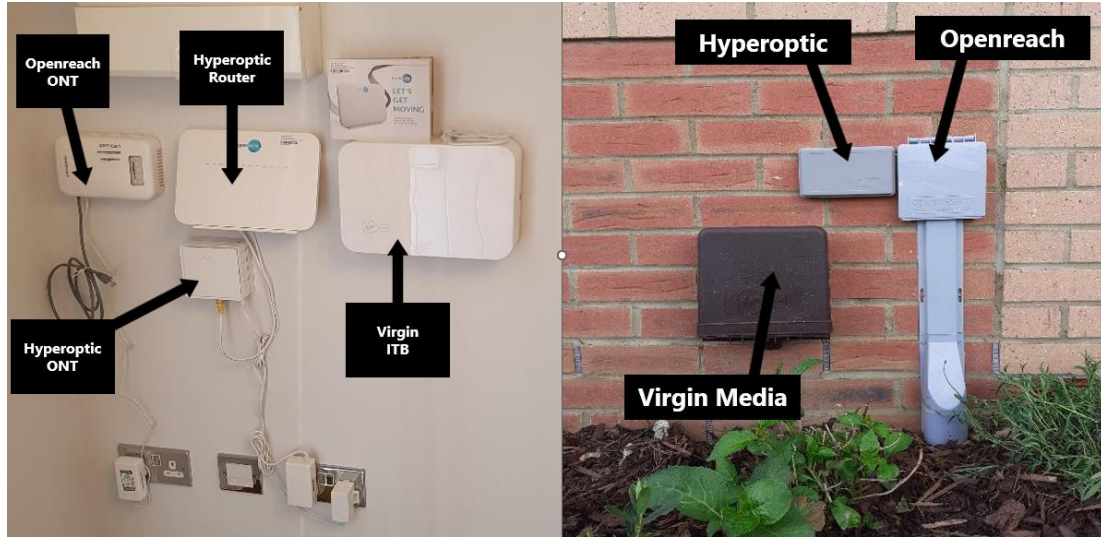
Once the devices max out the speed you've got, any more you connect to the internet will work slower.

More speed means there's more to go around when you've got loads of devices connected to the internet.

# Current Build on Your Sites

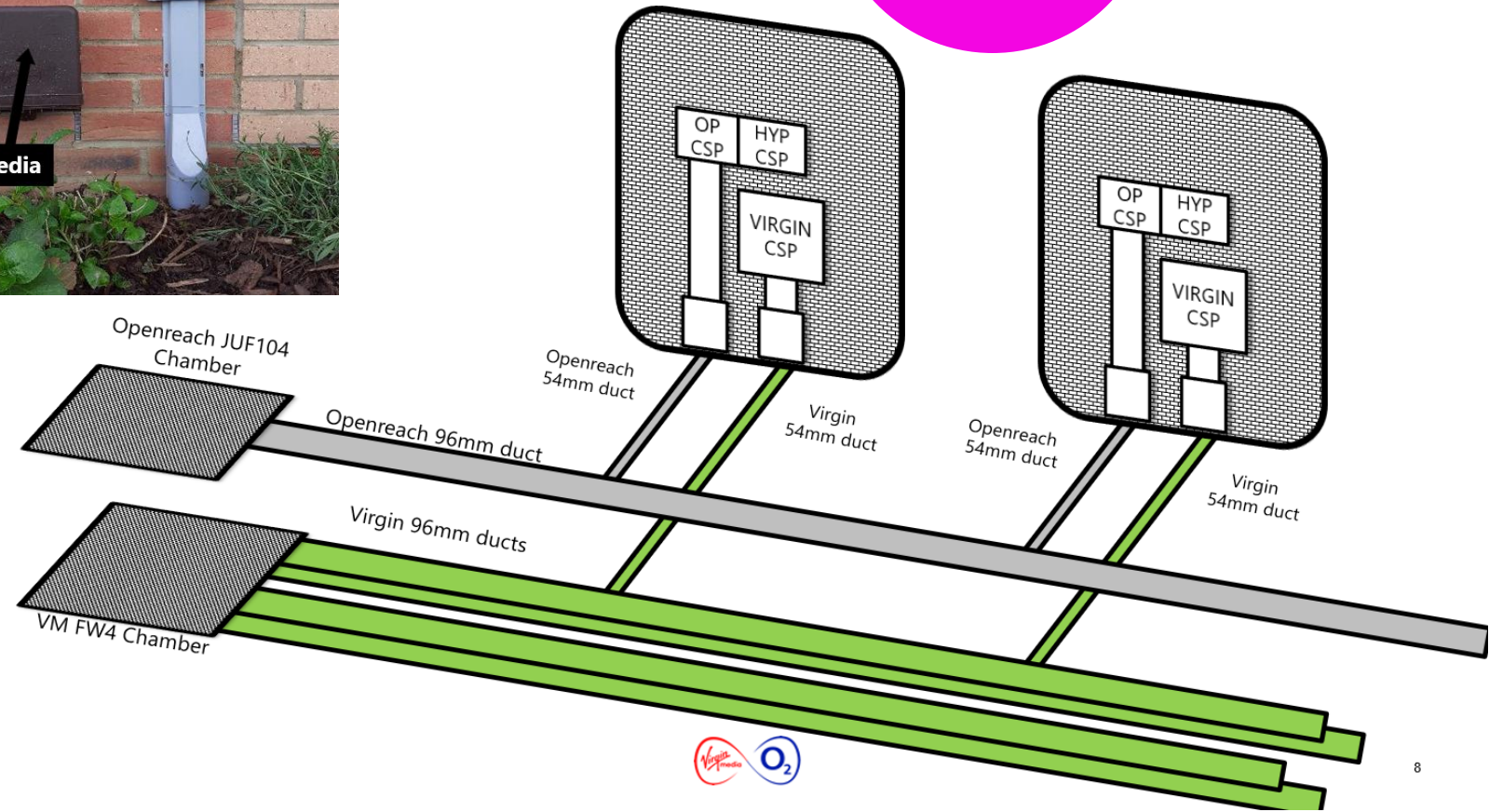
Majority of sites still require multiple Ducts and separate Chambers to Openreach

GTC / Triconnex Sites delivered via OFNL Network Build



DOCSIS / FTTP traditional build also requires Cabinets onsite!

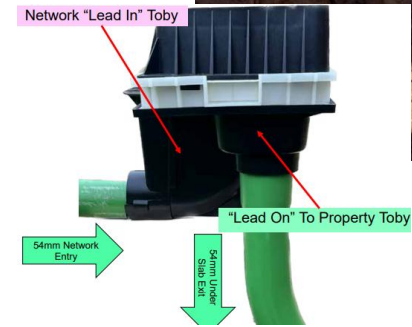
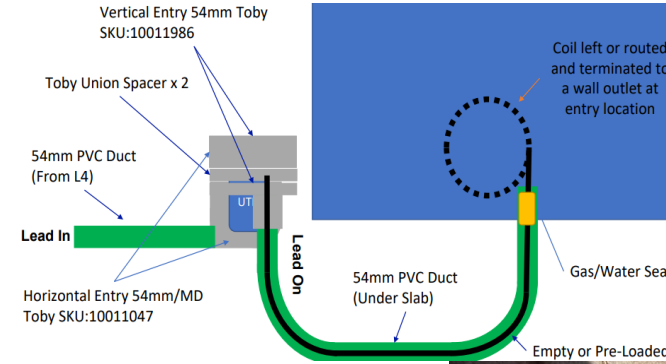
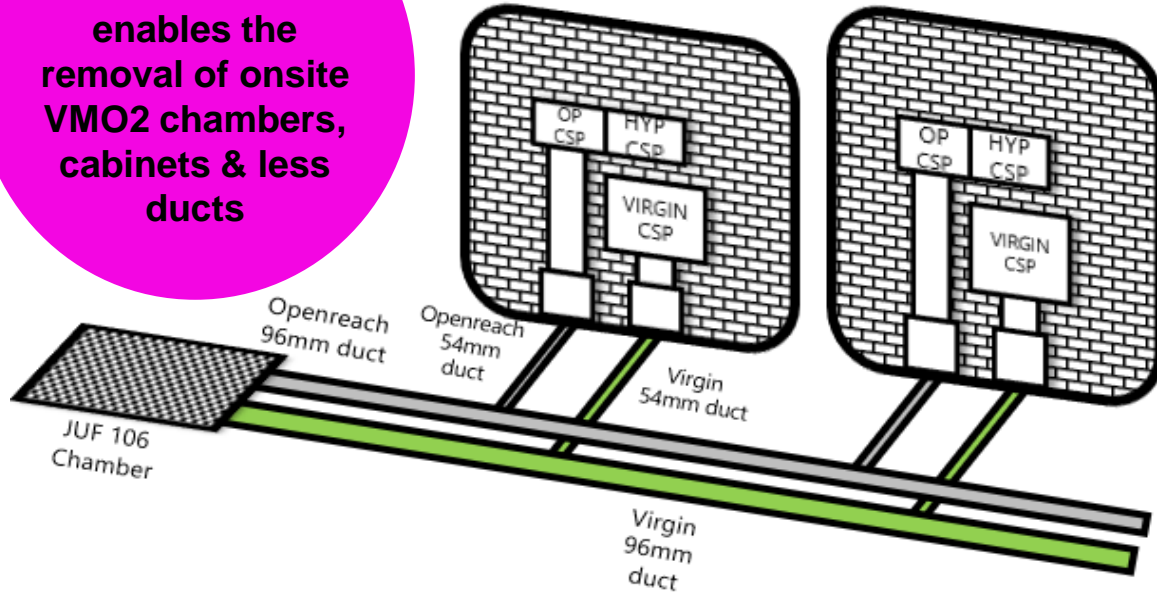
Internal cabling required from comms cupboard to rooms requiring broadband / TV



# Future Build on Your Sites

Improvements from FTTP & XGS-PON

Using Openreach chambers enables the removal of onsite VMO2 chambers, cabinets & less ducts



Duct Under Slab could replace brown ETB with floor level box in front of house or footpath

Micro-duct/fibre from the ETB to a double gang backbox – no multiroom cabling

