An exploration of UK full fibre broadband

Simon Hunt

For a few dollars more

A tale of:

- Grabbing the money
- Self-inflicted wounds
- Twists and turns
- Winning

But no engineering……..

UK Full Fibre Broadband

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Told with some economic and engineering and insight…………………
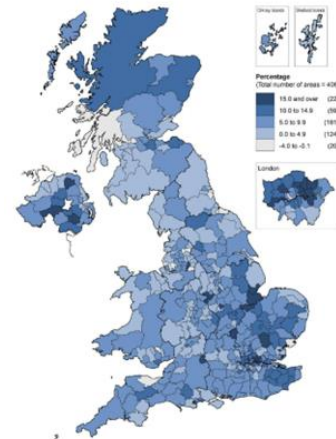
Infrastructure   Service Innovation   Feel the speed

Infrastructure

Grabbing the money and self-inflicted wounds

- 29m UK Homes, not evenly distributed
  - 68%* Gigabit capable
  - 37%* FTTP
- Two incumbents Openreach and VMO2
  - Homes passed
    - 8m Openreach
    - 2m VMO2
    - 6m 100+ Altnets
- Plans to cover 55m homes passed

UK Population density

$$Goodness = \frac{1}{Badness}$$

How linear motors work

Infrastructure

An access network needs a core and metro networks too

ISPs and London Internet Exchange See Record UK Data Traffic

Thursday, Oct 20th, 2022 (2:15 pm) - Score 1,896
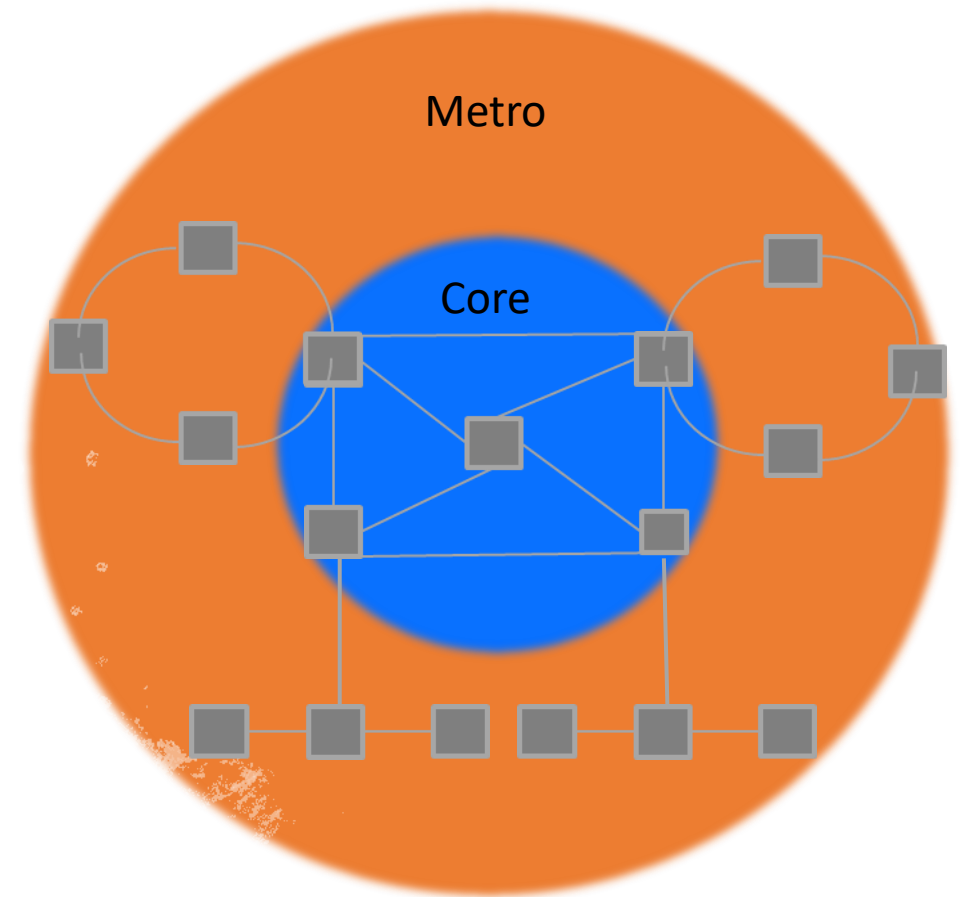
Email | Link News   9 Comments

Internet traffic across UK broadband ISPs surged last night on the back of several Premier League football matches streamed on Amazon, which resulted in data usage across the London Internet Exchange (LINX) reaching a new record peak of 7.179Tbps (Terabits per second) and TalkTalk hitting 9.105Tbps.

The new peak record of 9.105Tbps was set on TalkTalk's network last night at 9:20pm, overtaking their previous record of 8.715Tbps set on April 27th. A similar surge was also witnessed by other ISPs and can be seen by viewing yesterday's aggregated traffic data from LINX, which handles a key chunk of UK and global data traffic through their switches via around a thousand members (broadband ISPs, mobile operators etc.).

However, LINX does not provide a complete overview of the internet traffic flow from all ISPs, but they do give a useful indication of how much extra traffic is flowing around when compared with normal conditions.

Metro
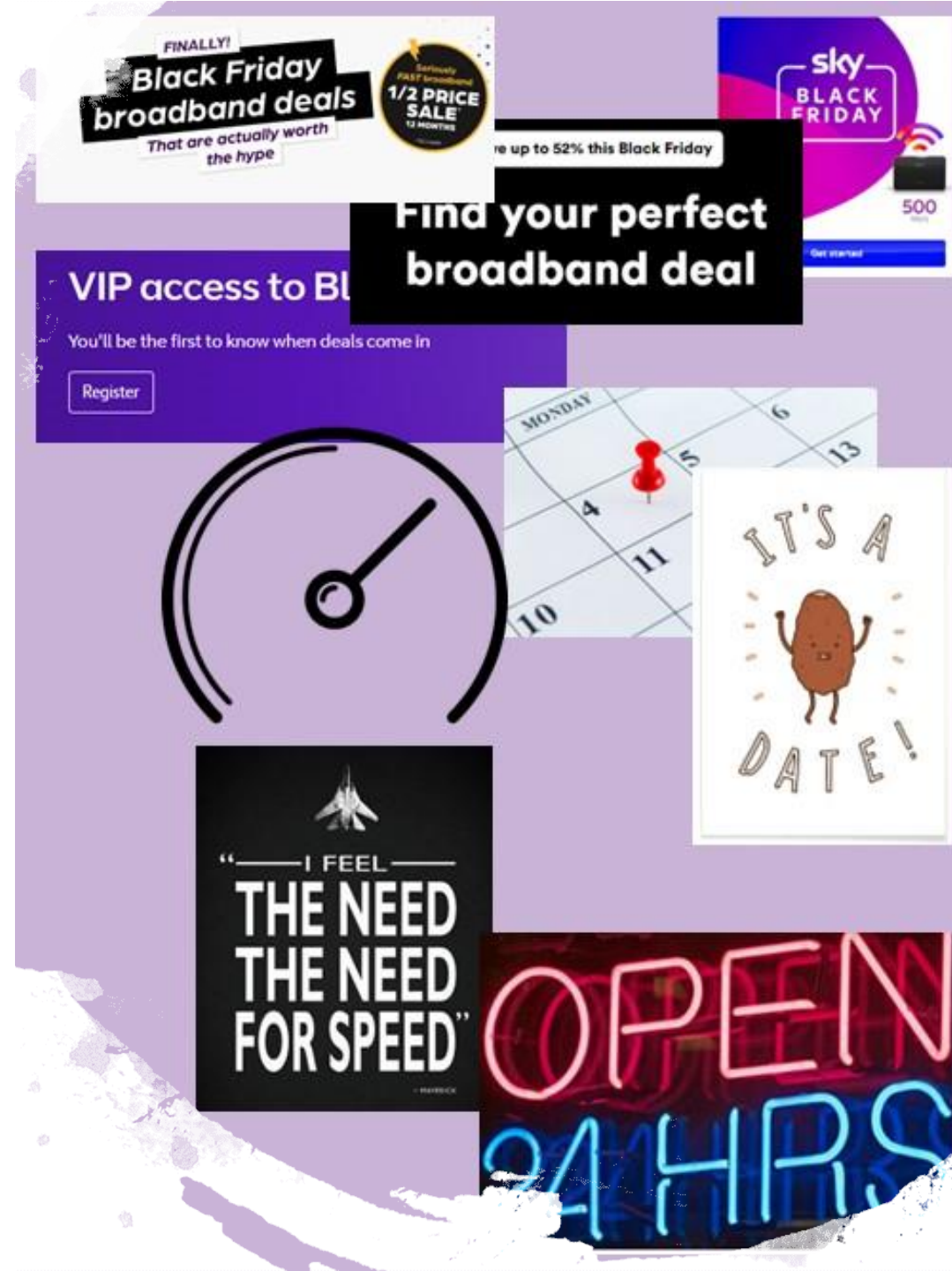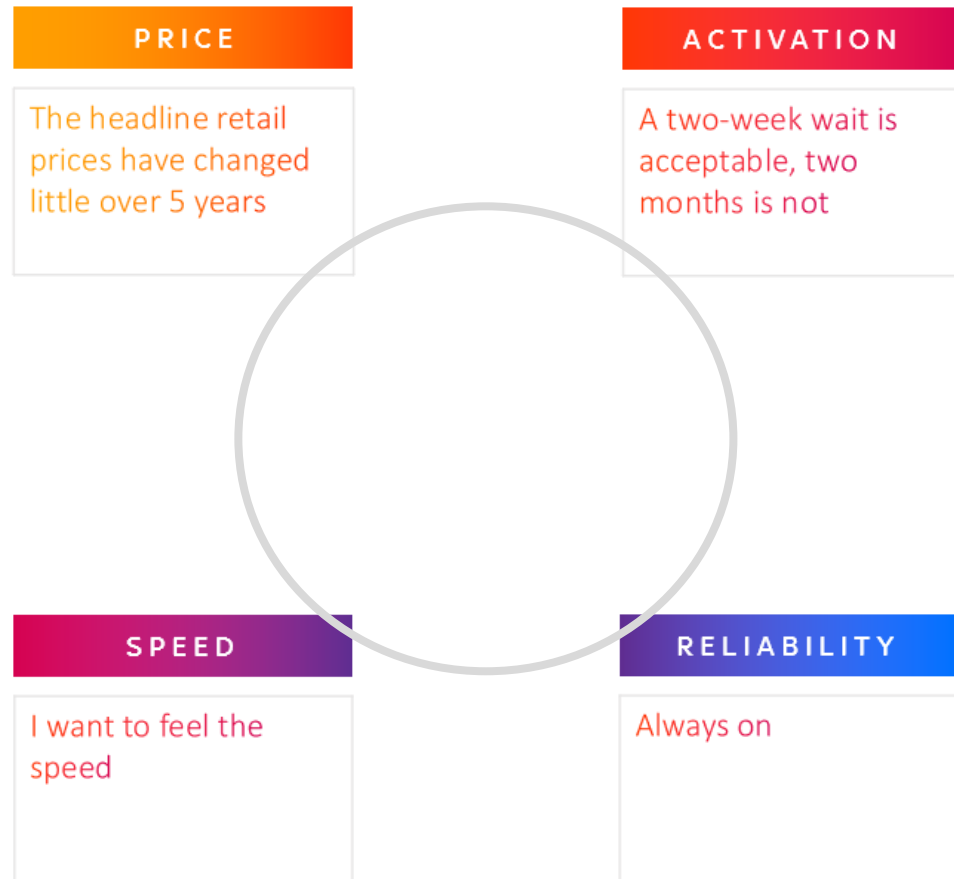
Core

Infrastructure

Its not all about networks

Operating model is key
- Retail is more complex than wholesale

Systems are key
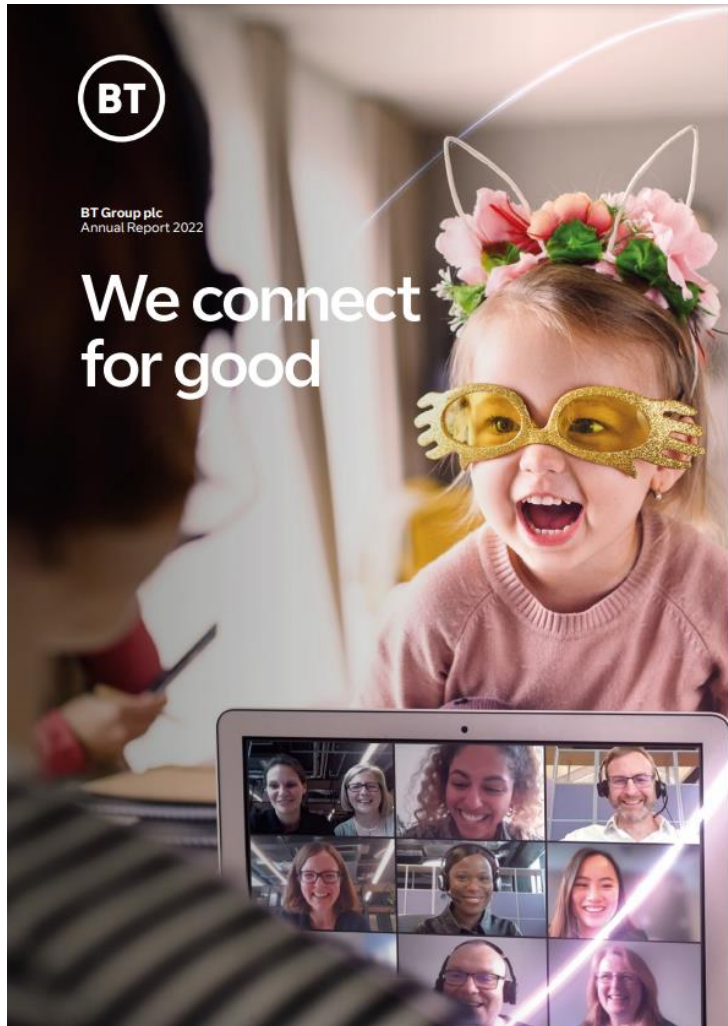- Low automation holds back growth

Wholesale | Retail

Automated | Manual

Value | Premium

Automated | Manual   Automated | Manual

| Marketing | Sales | Dropout | Activation | Early Life | In Life | Churn |

CoPQ

Service

The customer perspective

PRICE
The headline retail prices have changed little over 5 years

ACTIVATION
A two-week wait is acceptable, two months is not

SPEED
I want to feel the speed

RELIABILITY
Always on

Service Innovation

Service Provider Engineer

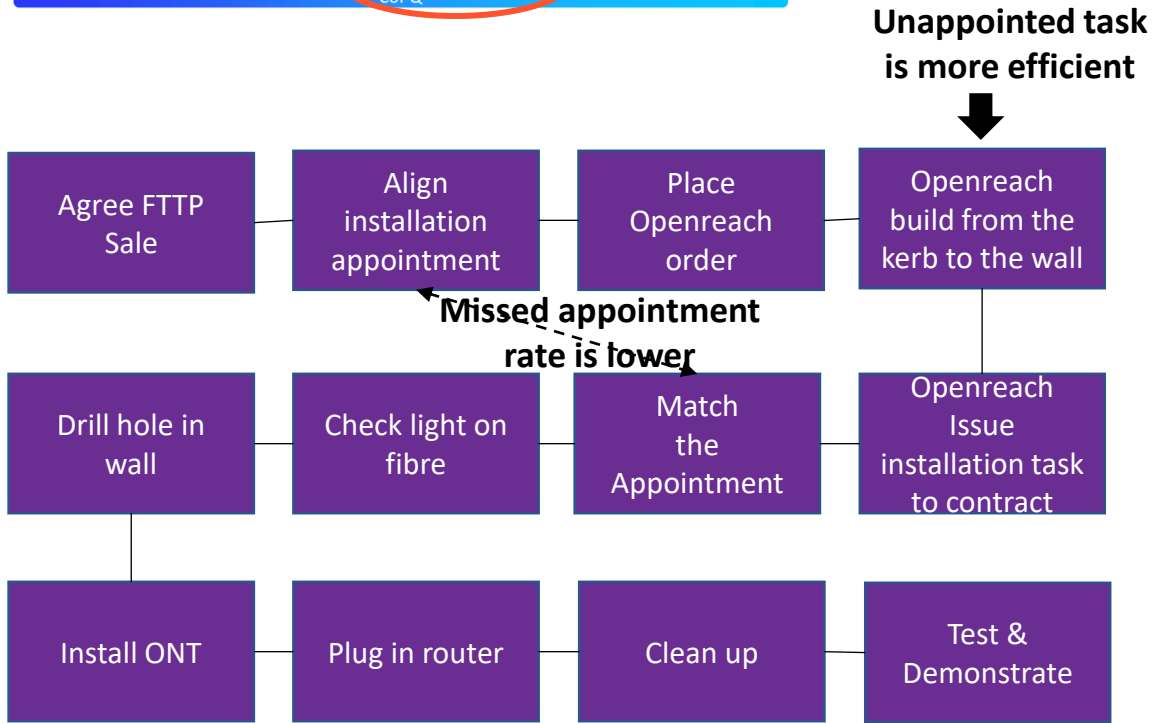Marketing | Sales | Dropout | Activation | Early Life | In Life | Churn

CoPQ

Importantly, 42 of our CP customers have already signed up to the Equinox pricing deal on our full fibre platform. And we continue to strengthen our CP relationships. For example, Sky's engineers can now connect their customers to our network directly

Service Innovation

Service Provider Engineer

Marketing | Sales | Dropout | Activation | Early Life | In Life | Churn
CoPQ

Unappointed task is more efficient

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Agree FTTP Sale → Align installation appointment → Place Openreach order → Openreach build from the kerb to the wall

Drill hole in wall → Check light on fibre → Match the Appointment → Openreach Issue installation task to contract

Install ONT → Plug in router → Clean up → Test & Demonstrate
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Missed appointment rate is lower

Failure rate is much lower

Contract for your own installation work

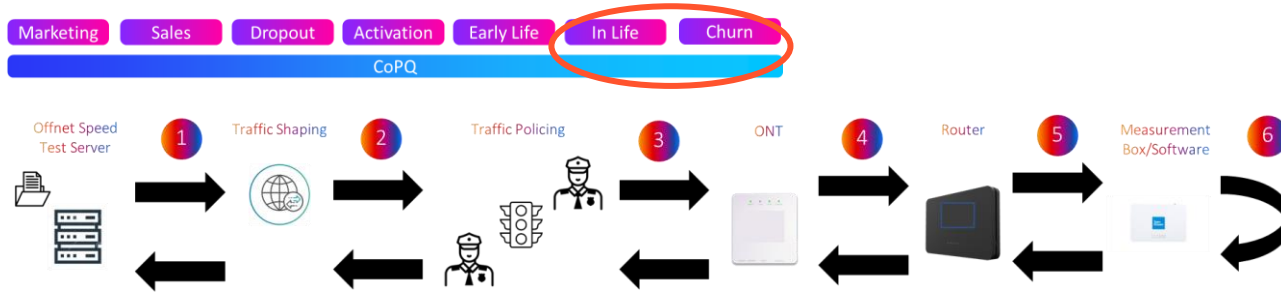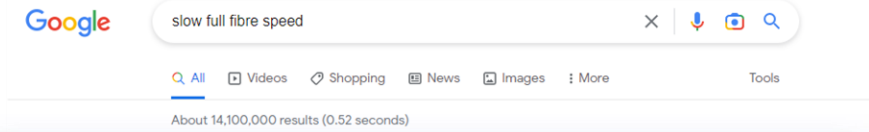# Feel The Speed

You get what you measure

Figure 12: Average 24-hour download speeds, by broadband package: March 2022 (Mbit/s)

TalkTalk 500 Mbit/s FTTP		451.6 406.4
BT 300 Mbit/s FTTP		303.9 300.1
TalkTalk 150 Mbit/s FTTP		159.9 155.1
Sky 145 Mbit/s FTTP		150.2 144.3
BT 145 Mbit/s FTTP		148.7 146.9
TalkTalk 67 Mbit/s FTTP		80.0 80.5
Virgin 1.1 Gbit/s cable		1137.5 1121.8
Virgin 516 Mbit/s cable		540.7 531.5
Virgin 362 Mbit/s cable		380.3 371.6
Virgin 213 Mbit/s cable		217.9 212.4
Virgin 108 Mbit/s cable		110.8 109.2

Ofcom broadband speeds published October 2022

The Final Scene

- Embrace uneasy partnerships
- Beware the twists and turns
- Be prepared to disrupt
- Don't be fooled by illusions

But there are a few dollars more to be found in full fibre broadband

Questions