TV distribution in 2040

Why it cannot be assumed that broadband will offer a universal solution for all of the UK

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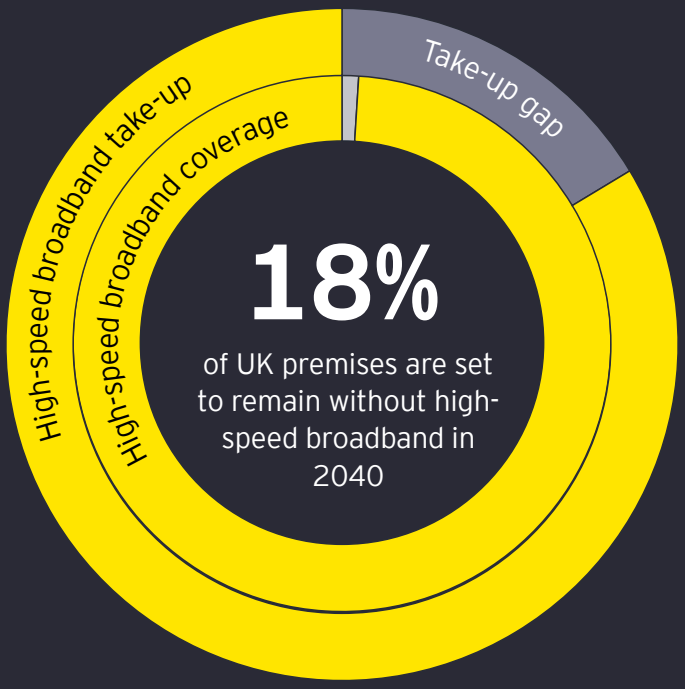
Contents

Key findings

The recent increase in online video streaming across the UK raises the question of whether the broadband network could be the sole platform for broadcasting a universal TV service over the next two decades, if the existing Digital Terrestrial Television (DTT) network were to be switched off.

A key concern if relying on IP (internet protocol) services for universal TV provision is the persistent gap in the take-up of high-speed broadband (30 Mbps+).

To better understand this, we conducted a statistical analysis to identify the barriers to broadband take-up, before using these to forecast the landscape in 2040.



Key findings for TV distribution in 2040

1 | Over 5.5 million premises in the UK (18%) are predicted to be without a high-speed broadband subscription in 2040, despite the network covering 96% of premises today and 99% by 2030.

2 | Vulnerable groups such as the elderly, low-wage households and people with disabilities are less likely to take high-speed broadband.

3 | Northern Ireland, Wales, Scotland and the Northeast, Northwest and Yorks and Humber in England are set to remain the most affected by low take-up of high-speed broadband in 2040.

4 | An over-reliance on broadband for universal TV delivery risks exacerbating the digital divide with greater inequality around access to information, entertainment and major live events.

5 | A hybrid solution combining DTT with IP services will promote greater consumer choice, social equality, reliability and cost.

6 | Greater certainty for the future of DTT is needed to help unlock further investments in broadcast quality for everyone.

1. How people are watching TV today

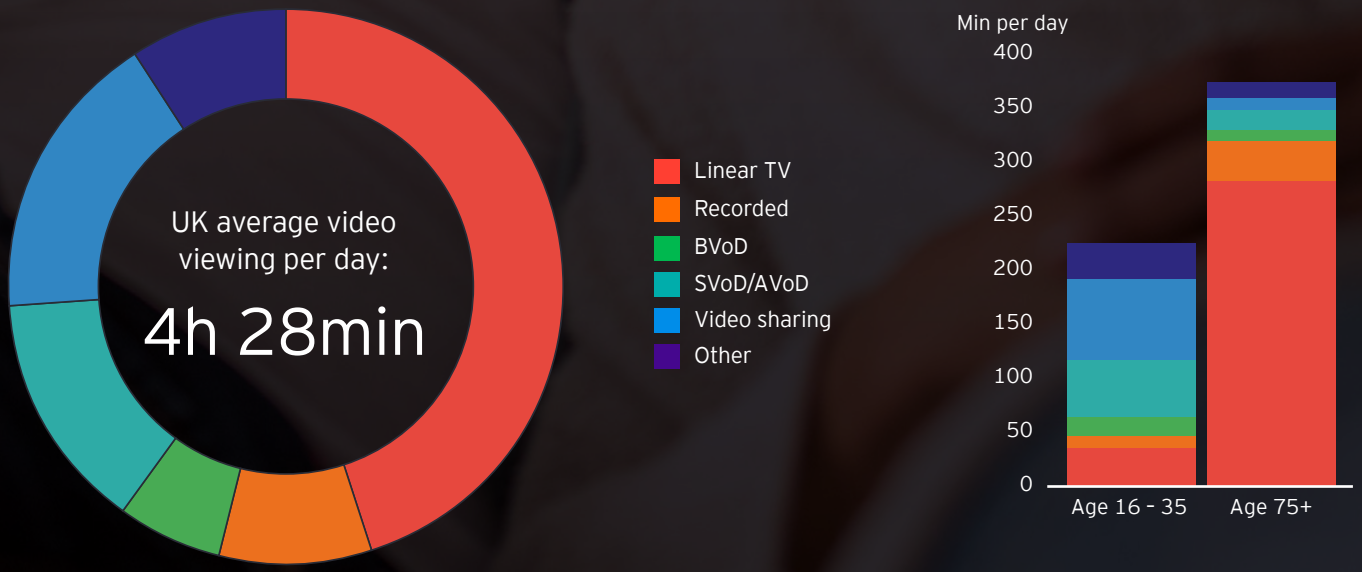
Linear TV remains the most popular mode of watching overall, though younger UK viewers spend a larger proportion of their time than older audiences watching short-form and on-demand content via Over-the-Top (OTT) services

The last decade has been a 'Golden Age' for television, with consumers enjoying an ever-growing array of high-quality content via a range of different platforms and devices.

While linear broadcasts over DTT remains the mainstay of UK television viewing, the proliferation of OTT streaming services – delivered over the internet to smart TVs or mobile apps - has raised questions about the future of TV distribution.

44% of all UK video viewing is linear TV ...

... rising to **80%** for older viewers

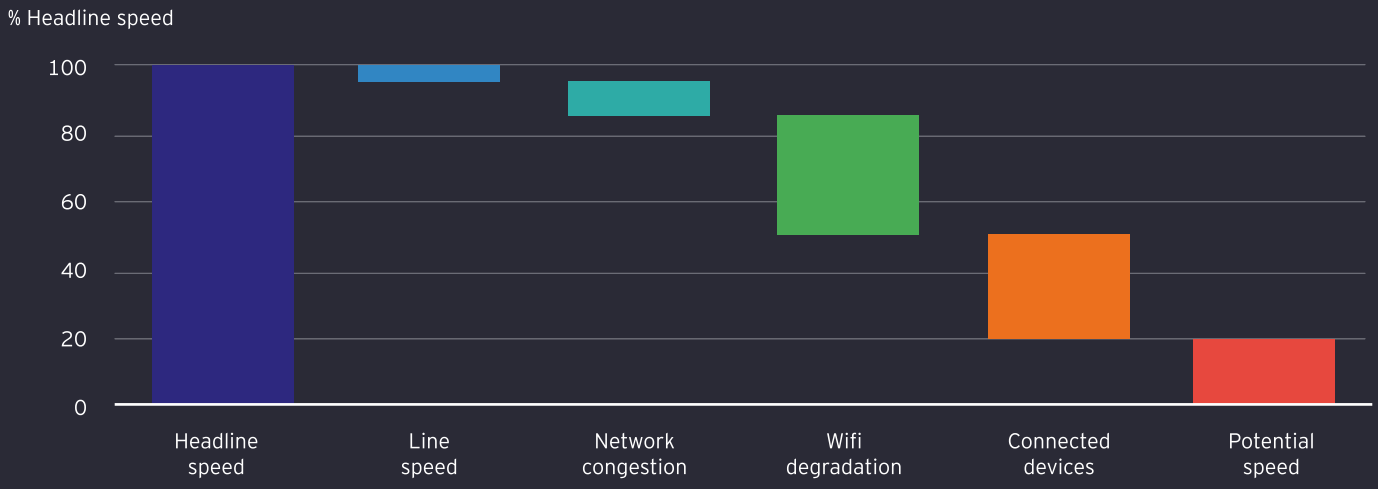


Source: Ofcom, Media Nations Report, 2023

High-speed broadband is needed to stream live TV reliably over IP networks

The headline connection speed advertised to consumers is not the only thing determining the reliability of broadband for video streaming. A range of other factors can erode broadband performance by up to 80%, reducing the quality of the video and causing interruptions such as buffering and jittering.

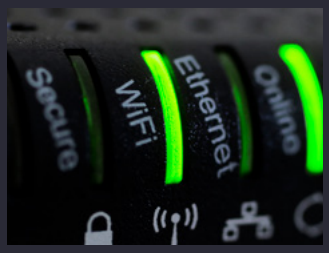
Factors affecting broadband speed (stylised example)



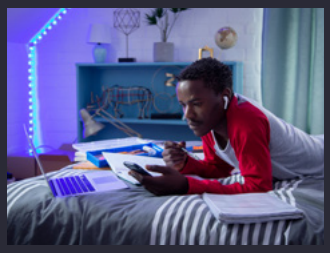
Source: EY analysis

Line speed: Ofcom requires ISPs to give customers a speed guarantee at the time of purchase, which is typically less than the headline speed of their chosen broadband service.

Network congestion: Ofcom reports customers' peak-time download speeds are typically 10% lower than the maximum, with some customers facing a decline of up to 40%.



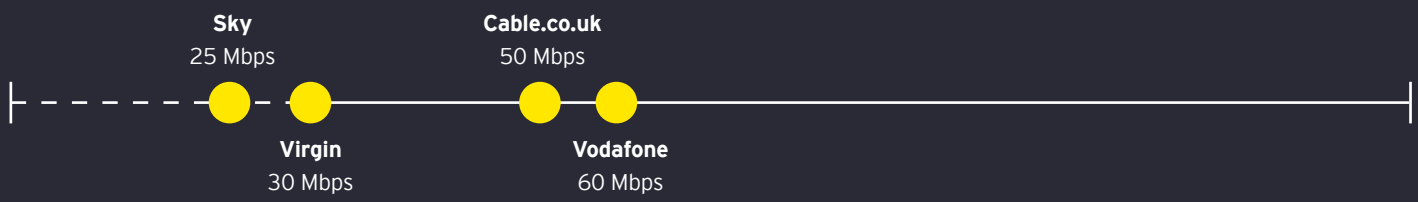
Wi-Fi degradation: Ookla speed tests show Wi-Fi connections are generally 30%-40% slower, however many customers prefer Wi-Fi-enabled TV devices for ease and flexibility.

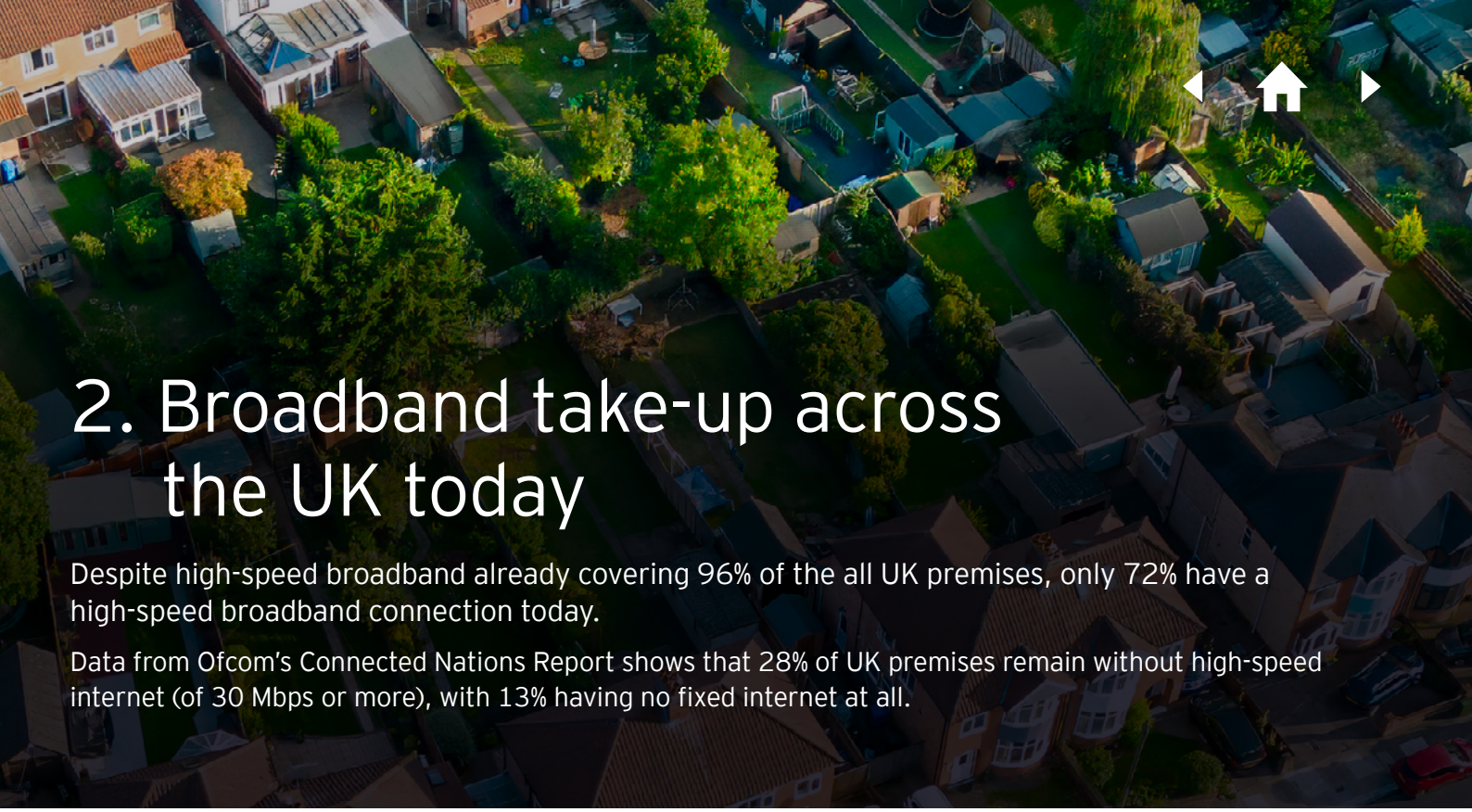


Connected devices: an ever-growing array of connected devices and services are putting increased strain on home internet connections.

Many service providers therefore recommend speeds of around 30 Mbps and up to 60 Mbps for reliable, high-quality video.

Recommended broadband speeds for reliable video streaming



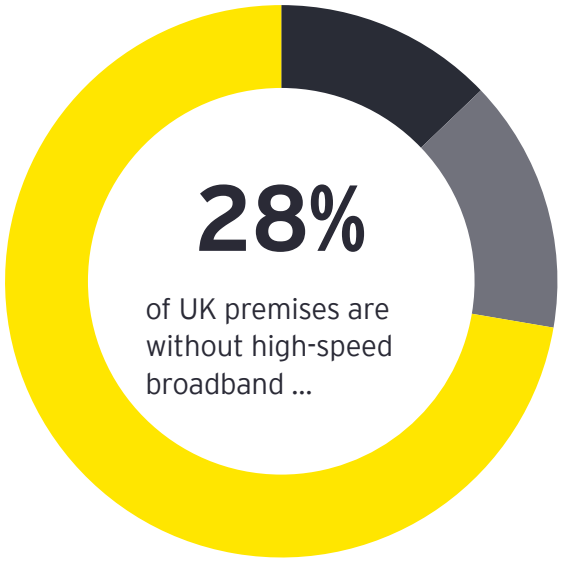


2. Broadband take-up across the UK today

Despite high-speed broadband already covering 96% of the all UK premises, only 72% have a high-speed broadband connection today.

Data from Ofcom's Connected Nations Report shows that 28% of UK premises remain without high-speed internet (of 30 Mbps or more), with 13% having no fixed internet at all.

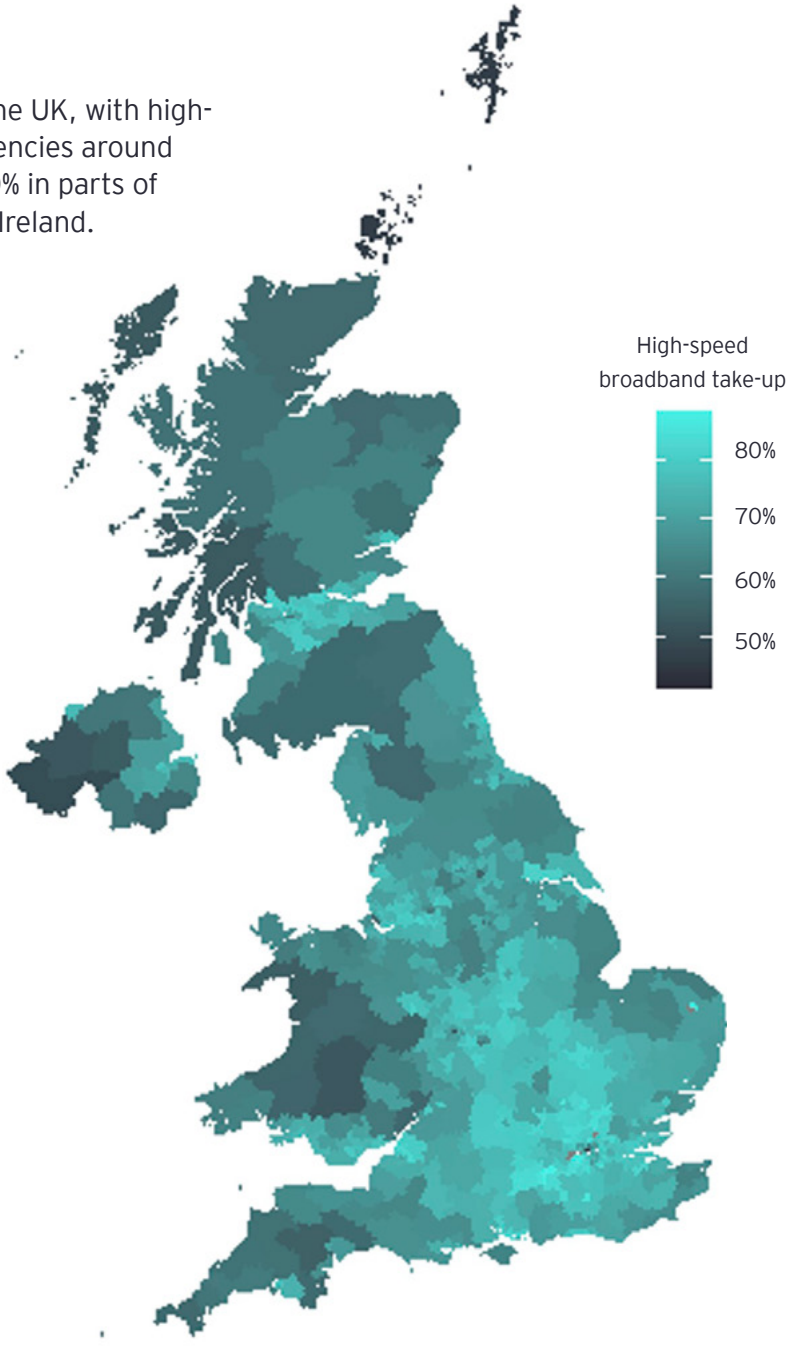
The data also shows a persisting 'digital divide' in the UK, with high-speed broadband take-up reaching 90% in constituencies around London and the South East, yet falling as low as 50% in parts of Northwest England, Scotland, Wales and Northern Ireland.



... with Northern Ireland, Wales, Scotland and Northwest England typically having the lowest levels of take-up

- No broadband
- Low-speed broadband
- High-speed broadband

Source: Ofcom, Connected Nations Report, 2022



What reduces broadband take-up?

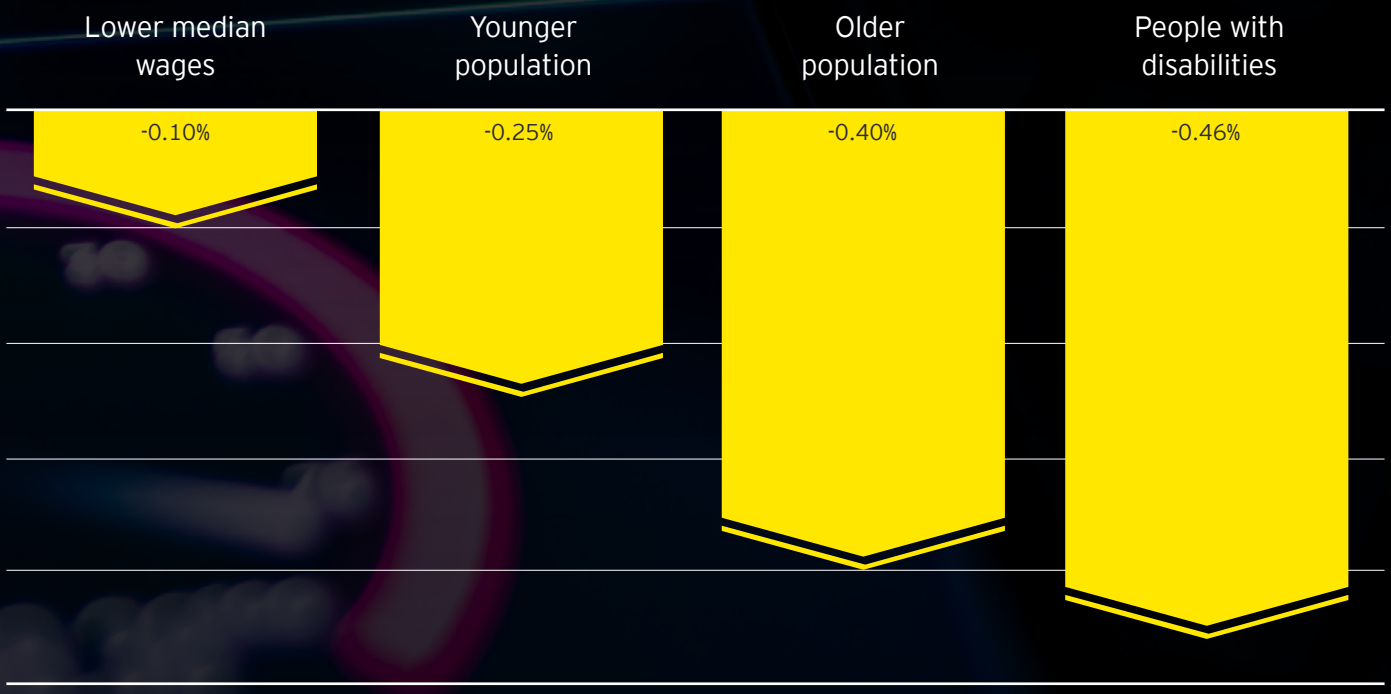
Combining broadband penetration data from Ofcom's Connected Nations report with a range of socio-demographic measures from the Office of National Statistics, we conducted a constituency level econometric analysis to determine the factors affecting high-speed broadband take-up in the UK (see page 17 for a link to our full report).

Our analysis finds that reduced levels of take-up are associated with a broad cross-section of vulnerable groups, including:

- The elderly (+65)
- Those on lower wages
- People with mental or physical disabilities

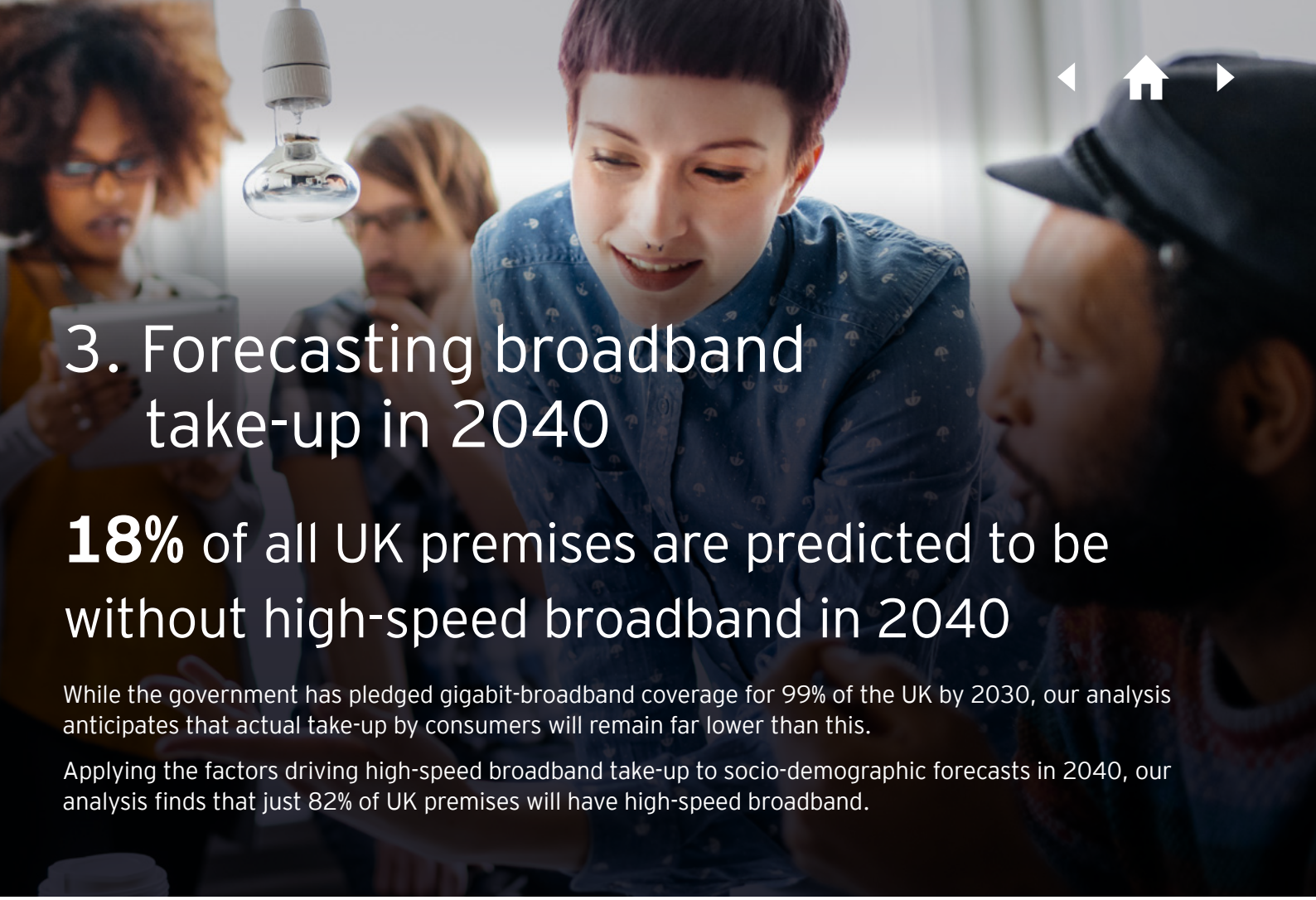
We also found reduced high-speed broadband take-up among younger populations (those aged 26 to 35 in 2022). Combined with the growing number of mobile subscriptions in the UK, this suggests that some younger households may be foregoing high-speed fixed broadband altogether. However, doubts remains around the extent to which consumers can rely on mobile services alone for watching TV given the costs and limitations of such data-intensive mobile internet usage.

Key factors reducing high-speed broadband take-up in a constituency



Impact of a 1 percentage-point increase in the prevalence of each factor on the take-up of high-speed broadband in a given constituency (i.e., values represent percentage point declines of high-speed broadband take-up)

Source: Ofcom, Connected Nations Report, 2022



3. Forecasting broadband take-up in 2040

18% of all UK premises are predicted to be without high-speed broadband in 2040

While the government has pledged gigabit-broadband coverage for 99% of the UK by 2030, our analysis anticipates that actual take-up by consumers will remain far lower than this.

Applying the factors driving high-speed broadband take-up to socio-demographic forecasts in 2040, our analysis finds that just 82% of UK premises will have high-speed broadband.

Digging into the data, we find that the constituencies with the lowest take-up will remain concentrated in Northern Ireland, Wales, Scotland and the Northeast, Northwest and Yorks and Humber in England where median wages are up-to 30% lower than the national average.

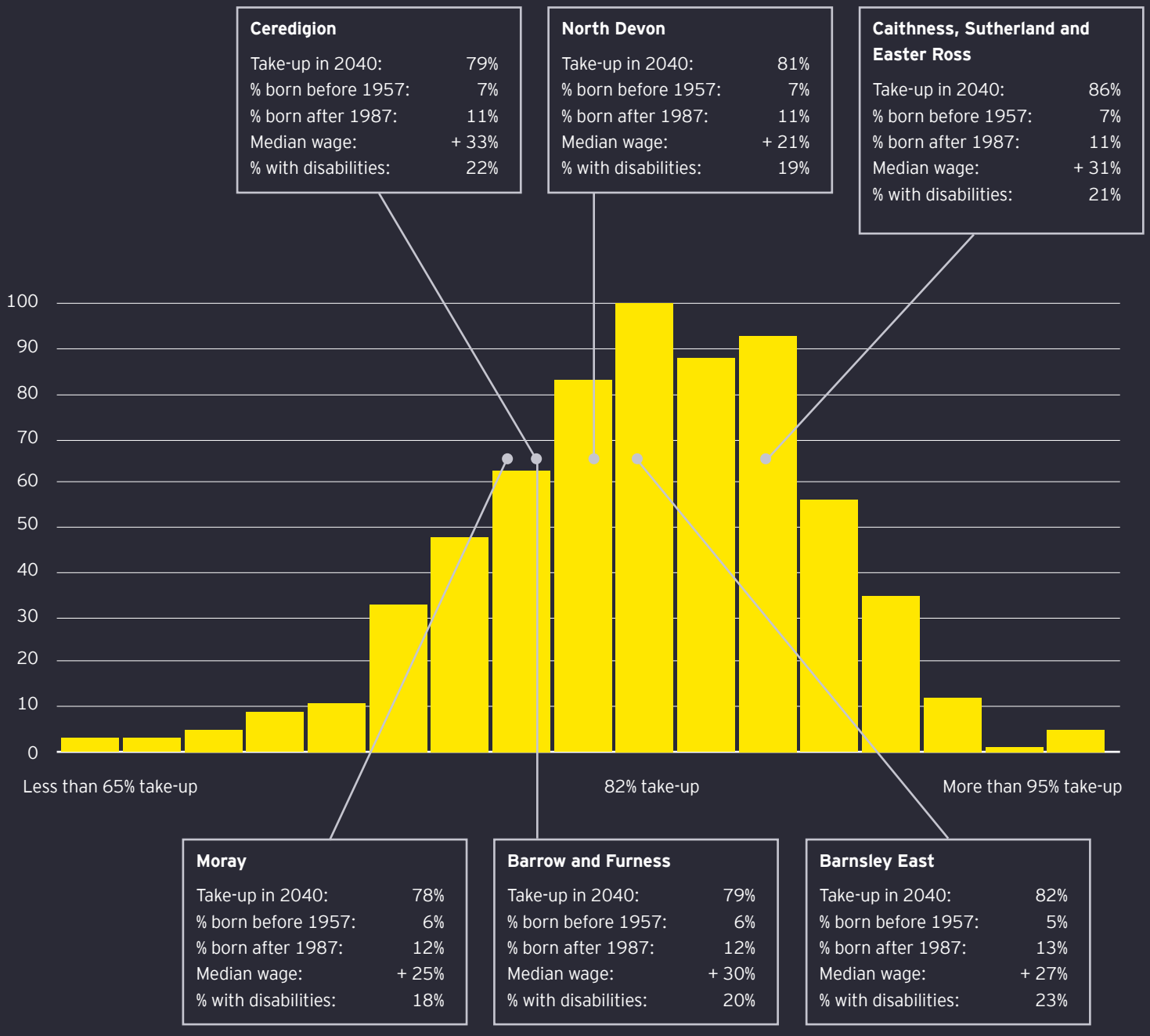
Region	2022 actual high-speed broadband take-up	2040 forecast high-speed broadband take-up	Premises without high-speed broadband in 2040
Northern Ireland	66%	76%	24%
Northeast	71%	79%	21%
Yorkshire and The Humber	70%	80%	20%
Wales	68%	81%	19%
Scotland	68%	81%	19%
Northwest	72%	81%	19%
West Midlands	72%	82%	18%
Southwest	69%	83%	17%
East Midlands	74%	83%	17%
London	77%	83%	17%
East	76%	84%	16%
Southeast	76%	84%	16%
UK Average	**72%**	**82%**	**18%**

How will broadband take-up be distributed?

The variation in high-speed broadband take-up is even more stark if we look at the constituency level. Our 2040 forecast anticipates that the highest levels of take-up will be over 95% (e.g. Surry Heath), while the lowest will be less than 65% (e.g., Aberdeen North and Aberdeen South).

Overall, take-up by constituency will be centred around the national average of 82%, with the majority of constituencies set to be in the 75% to 90% range.

Count of UK constituency by high-speed broadband take-up, with selected examples



Source: EY analysis.

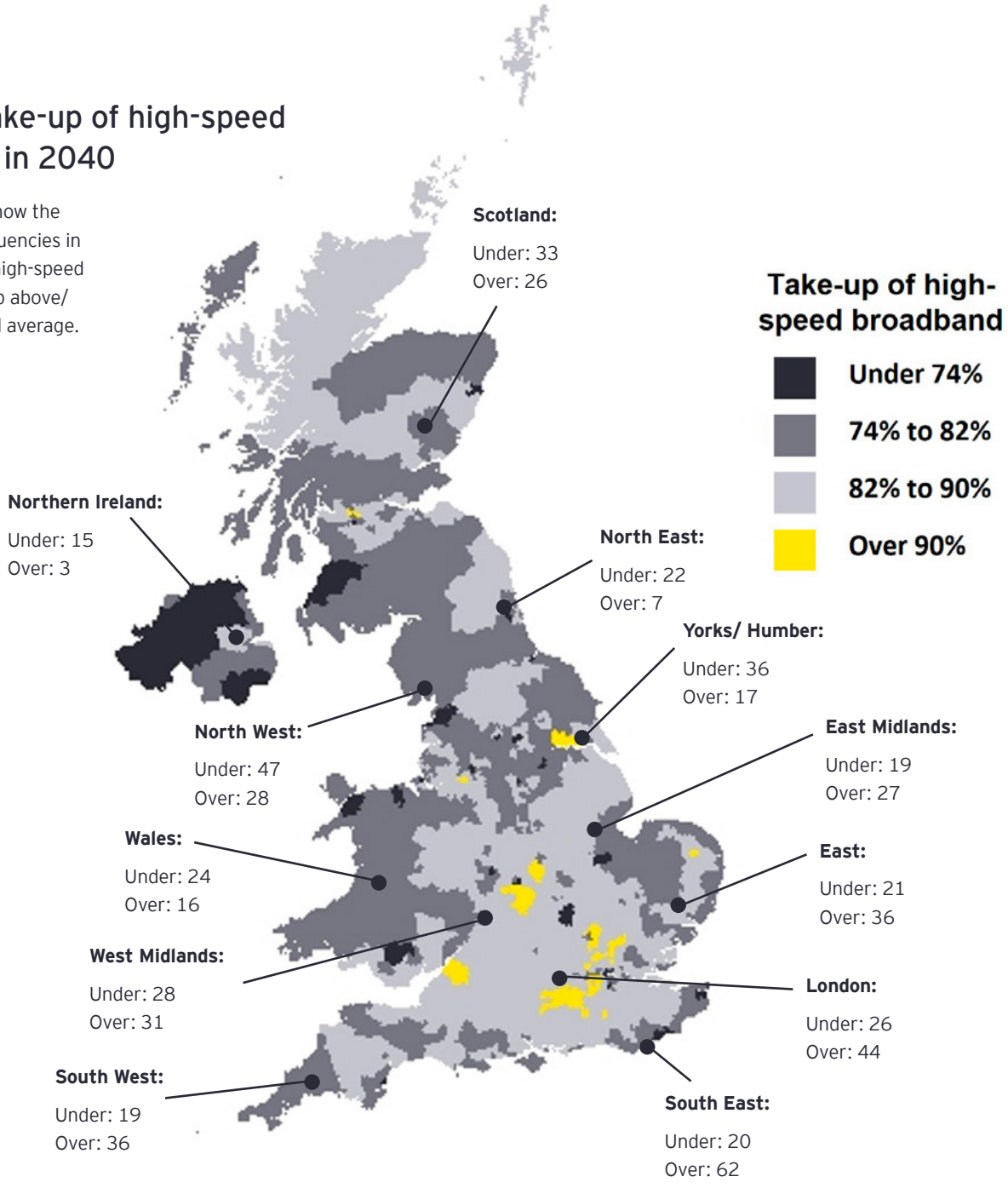
Where will high-speed broadband take-up be lowest?

We anticipate that 312 constituencies will have high-speed broadband take-up of less than 82% (the UK average) in 2040, with 266 of those being outside of London and the South East.

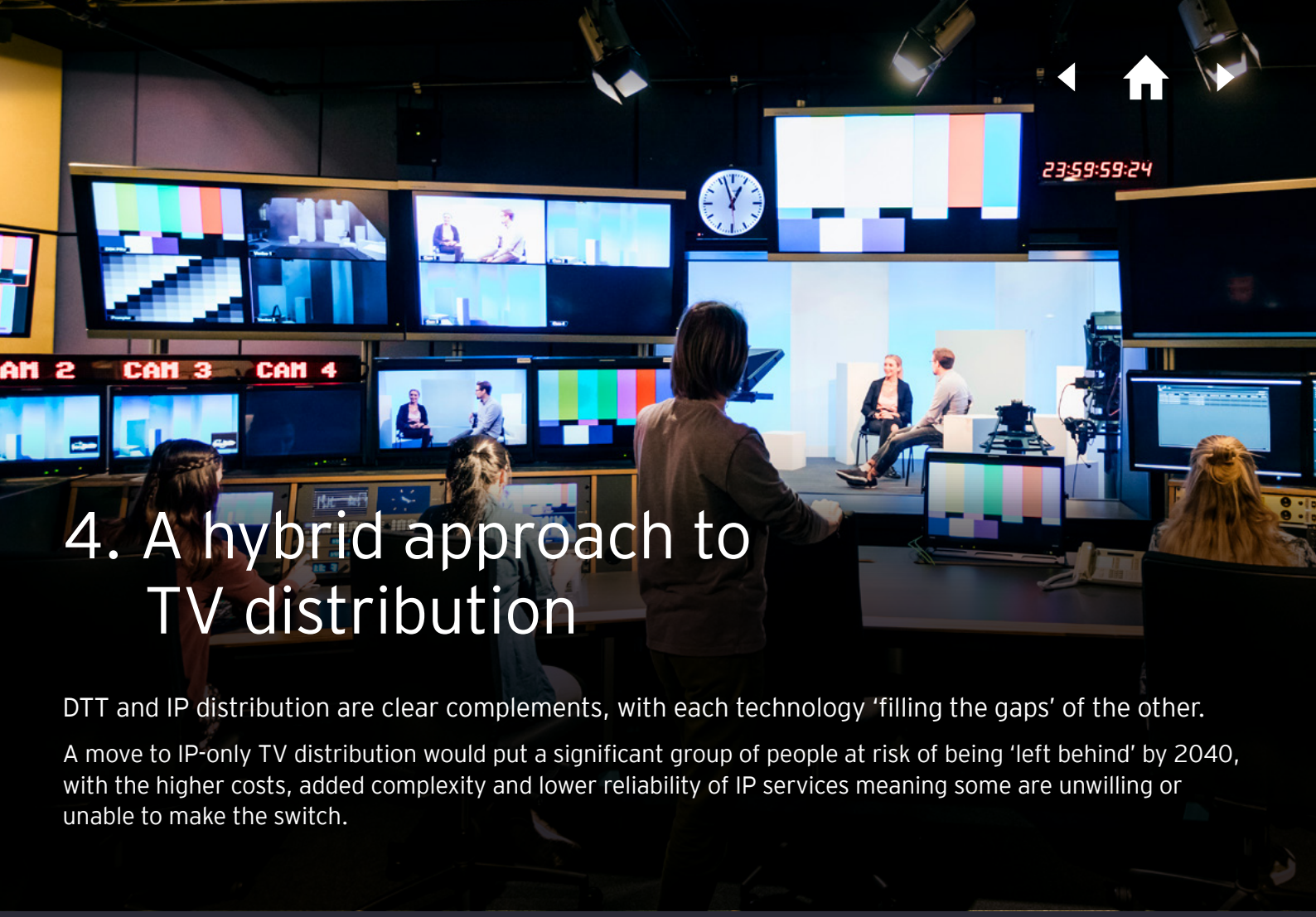
While broadband access is itself a key consideration for social mobility, these findings suggest that the loss of DTT for universal TV distribution would risk further exacerbating the UK's 'digital divide', with the sharpest effects felt by the most vulnerable and disadvantaged groups of society.

Forecast take-up of high-speed broadband in 2040

NOTE: Call-outs show the number of constituencies in each region with high-speed broadband take-up above/ below the national average.



How do we ensure continued quality, choice and reliability of TV broadcasting for everyone in the UK?



4. A hybrid approach to TV distribution

DTT and IP distribution are clear complements, with each technology 'filling the gaps' of the other.

A move to IP-only TV distribution would put a significant group of people at risk of being 'left behind' by 2040, with the higher costs, added complexity and lower reliability of IP services meaning some are unwilling or unable to make the switch.

In contrast, a hybrid DTT and IP solution mitigates the risks involved with IP-only distribution, while giving customers more meaningful choice. OTT services over IP offer consumers a wider variety of higher-definition content, where and when they want; while DTT offers a low-cost, universal and reliable TV service that can 'take the strain' at times of peak demand.

Consideration area	DTT	IP-only	Hybrid (DTT+IP)
Upgrade costs			
Customer costs			
Energy efficiency			
Quality and choice			
Reliability			
Certainty for broadcasters			

Key: Worse outcomes  better outcomes

Policy recommendations

With policymakers now considering issues that will impact on the future of TV distribution in the UK, it is crucial that the differing needs of all consumer groups are well reflected.

Despite the roll-out commitments from government, there remains considerable ambiguity around the future take-up of high-speed broadband, as well as the preferences viewers will have for where, when and how they watch TV.

Added to this there are additional costs and complexities when receiving TV over the internet that may leave some viewers unwilling or unable to switch to IP services. This has led MPs to consider the risks of relying on broadband alone for universal TV distribution, with growing calls for policies that address these.

> “As we focus on the future, our attention must also be on making sure people are not left behind; because new ways of consuming TV should not come at the expense of those who still enjoy terrestrial TV.

Rt hon Lucy Frazer, MP
Minister for Digital, Culture, Media & Sport

> “We risk excluding those who live in rural areas, do not have an internet connection and an older generation that rely on being able to watch television in its traditional format.

Stephanie Peacock, MP
Shadow Minister for Digital, Culture, Media & Sport

Recommendations

1 Ensure affordable TV for everyone

With 5.5m premises set to be without high-speed broadband in 2040, losing access to DTT would mean having to pay additional monthly broadband fees to receive live TV over IP.

2 Maintain genuine choice for viewers

For many users, greater choice does not mean an array of higher-definition content; but rather the option to have a universally available, reliable, and easy-to-use service, free at the point of consumption.

3 Provide certainty for stakeholders

Greater certainty over the future of DTT could help unlock fresh investment to sustain and improve the DTT network for the next generation of TV viewers across the UK.

5. Our full report

To understand the factors inhibiting high-speed broadband usage today, we performed an econometric analysis of take-up across 650 UK constituencies, using connections data from Ofcom's Connected Nations report and socio-demographic data from the Office for National Statistics and National Records of Scotland.

We then used this understanding to forecast the anticipated the gap in the take-up of high-speed broadband in 2035 and 2040, assuming full coverage and plausible socio-demographic changes.

Our study also considers a number of practical challenges with migrating to IP for universal TV distribution, before examining the potential benefits of a hybrid approach, combining DTT with IP.

For further detail on these insights, see our full report

Read more

Written by:

David Coulson
Partner, Economic Advisory
david.coulson@uk.ey.com

Gareth Shier
Director, Economic Advisory
gareth.shier@uk.ey.com

Richard Wilson
Assistant Director, Economic Advisory
rwilson2@uk.ey.com

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