# BBC Response to Ofcom's Call for Evidence on the Future of TV Distribution

BBC Distribution &
Business Development

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# Contents

# Introduction

Making the right choices about the future of TV distribution in the UK[1] could deliver huge benefits for audiences, the media industry, the economy and wider society. In short, the future of TV distribution could catalyse the emergence of a stronger, more inclusive Digital Britain. But delaying those choices or putting them in the hands of those who don't have the interests of UK audiences and creative industries at heart could result in a weakening of PSBs and undermine investment in and access to British content.

That is why the BBC welcomes Ofcom's call for evidence and the opportunity to contribute to the debate about the future of TV distribution. We have responded to each of Ofcom's questions as fully as possible but, at this relatively early stage of the debate, we cannot provide answers to all the issues Ofcom's raises and we are certainly not yet in a position to set out a blueprint or timetable for the future of TV distribution.

Instead, our response is shaped by our view that the future of TV distribution should be driven by meeting the conditions necessary for universality which we have as identified as: everyone is connected; everyone has access to high quality TV, radio and news; and everyone benefits from a fair and prosperous UK media economy. In our responses we suggest ways in which the BBC should collaborate with others in the media and wider sectors to meet these conditions and to provide the evidence needed to make informed decisions about the best way to move from the broadcast age into the online age.

Audiences must always be at centre of those decisions. The BBC's strategy is to deliver Value for All[2] and we are clear that the BBC must remain universal, whatever means are used to distribute its content and services.  No one in the UK should be left behind or unable to easily access all BBC services now or in the future. For the last 20 years, DTT (Digital Terrestrial Television) has been very successful in delivering reliable, universal, high quality TV services. DTT allowed us to move from the analogue era to the digital era, creating more channels and better services, like Freeview. But, in recent years internet technologies have offered a new alternative.

In fact, Ofcom's call for evidence comes at the right time because the 'digital transition' – the move of audiences from viewing via broadcast to viewing via IP (Internet Protocol) - is already well underway. Broadcast is undergoing decline in every age group and the majority of viewing will be via IP in the foreseeable future. Led by the growth of PSB

[1] Outside the UK, the distribution of television is vital in enabling the BBC to reach international audiences. BBC channels are available in a number of countries, and the BBC also holds contractual arrangements with broadcasters which allow BBC content to reach millions, via various distribution platforms. This response is solely focussed on the BBC's UK activities.

[2] BBC, Annual Plan 2023-24 (2023)

video players and subscriptions to global on demand services, these viewers have come to expect the greater choice, personalisation and utility that only IPTV can offer.

However, we cannot simply let the digital transition play out over time. There is a serious risk that if we don't take coordinated action to manage it now - working across the media sector, infrastructure providers and governments - we will fail to deliver positive outcomes for audiences. The owners of the broadcast network and others in existing supply chains have legitimate commercial interests to consider but it cannot be right to prioritise shareholder profits over audiences by maintaining infrastructure indefinitely. Broadcast technology is not unique in terms of its ability to deliver live, linear services that people know and love, nor is it the only way to achieve a resilient and universal distribution network. An indefinite commitment to a single technology now could mean that those people who spend the most time with broadcast TV – who tend to be older and less well off – find themselves marooned on a legacy distribution system which offers them only a fraction of the value that the majority get online. The BBC has always adapted to changing technologies to maximise value for all. Just as we didn't leave people to make-do with black and white TV when colour came along, we intend to ensure that everyone has access to all BBC content, wherever they are in the UK.

The large majority of TV households (70%) already watch at least some content via the internet on their TV, on average per week – they already have sufficient drivers to get online. But we know for others, particularly for older and more vulnerable people, change can be daunting. These people often see no reason to get online, even when they can; for others, costs and complexity are the barrier. But IPTV can be both familiar and easy-to-use, providing improved accessibility compared with terrestrial TV and other inclusive features. We believe that IPTV could provide a unique incentive for many people to get connected for the first time, opening the way to greater digital inclusion and accelerating the social and economic benefits of a fully Digital Britain. Of course, there will be some people for whom the connection options remain limited or the move online is still too difficult. But we believe that a combination of the gathering pace of organic transition along with a well-managed move away from broadcast towards IP distribution could in time help minimise the size of this group and allow for narrower, targeted interventions to tackle digital exclusion.

We do not underestimate the challenges of the changing distribution landscape. There are potentially significant impacts on other sectors, including radio and other aspects of our successful creative economy, which we need to manage carefully and fairly. Internet infrastructure and networks have so far kept pace with demand for IPTV, but more work is needed to ensure that this is maintained as demand increases and the peaks generated by hugely popular live events over IP grow bigger.

The UK's PSBs are well placed to take a leading role in addressing these challenges. We have a strong track record of working together to harness changes in technology in the

best interests of UK audiences, having delivered the successful Freeview platform and now by investing in its IPTV equivalent, Freely. The BBC's unique status and trusted relationship with audiences makes us particularly well placed to convene industry stakeholders and ensure the future of TV distribution is as successful as it can be. But we cannot do it alone. Government coordination is critical to the future of distribution which - unlike the digital switchover completed in 2012 - has impact far beyond TV. Given the link to wider digital inclusion, it has the potential to offer benefits that cross-over into many sectors from health to education, but only with the right investment and oversight.

This response signals our readiness to work with Ofcom, PSBs, UK and Nations Governments, audiences and the groups that represent them and others to shape the future of TV distribution. At the end of each answer, we suggest a number of specific actions which include:

- Ofcom to coordinate a collaborative process with infrastructure providers and their customers to identify future technical and financial tipping points for different distribution methods and the solutions required to manage their impact on audiences;
- PSBs, digital exclusion experts, ISPs and others to undertake research to understand which groups are especially at risk of being left behind in a transition from broadcast to IPTV, how this is likely to change over the next decade and what interventions are needed by Government and industry to address it;
- The same group to research the role TV can take in driving digital inclusion i.e. the relationship between access to video content online, internet adoption and gaining digital skills; and - with expert economists and social scientists - to quantify the benefits of using take-up of connected TV to accelerate internet adoption overall.

In conclusion, in response to Question 6, we suggest that Ofcom should commission the BBC and other PSBs, through the Future TV Taskforce[3], to carry out these actions. We look forward to seeing Ofcom's advice to DCMS about this.

[3] The Future TV Taskforce is made up of the UK Public Service Broadcasters (PSBs) (BBC, ITV, Channel 4, Channel 5, S4C and STV) and Everyone TV (ETV), formed with the aim of working together to understand issues around the increasing take up of TV distributed over the internet

# Question 1: How are audience demands and expectations evolving, and how does that vary for users of different TV platforms and different demographics?

In the last ten years audience demands in all demographics have been shaped by rapid evolution in the TV market. The availability of a wide range of VOD (video on demand) services including PSB players and global services such as Netflix and Disney+ - which offer varied and often exclusive content on-demand - have shifted people's expectations of TV. Audiences now expect their TV experience to offer more choice, personalisation and flexibility. They continue to demand easy access to linear and live channels – linear TV viewing remains a mainstream habit with 67% of all audiences in the UK tuning in via linear broadcast TV on average per week[4] – but they expect it in addition to on-demand content. The number of households who use only DTT (digital terrestrial television) to watch TV and have no cable, satellite, connected TV or broadband connection is decreasing (from 1.6m in Q3 2021 to 1.3m in Q3 2023).[5] But these households are more likely to be older, disabled and less well-off; so great care is needed to ensure that they are not left with less choice and poorer services as a result of changes in the TV market. The best way to guard against this is to be audience-led and ensure that, in the future, IPTV services - including the familiar live, linear channels - are universally available and adopted. Embracing and improving IPTV is the only way to meet all audience needs and expectations for quality and choice – and to future-proof universality.

## The audience shift from broadcast distribution to Internet Protocol (IP) distribution of TV[6] is already well underway

The digital transition is already advanced with audiences increasingly viewing content distributed via IP in addition to, or instead of, broadcast. Broadcast viewing continues to decline among all audience groups, and particularly among younger audiences. Linear broadcast viewing is down 7% year on year among all audiences, 16% among 16-34s and 12% among 35-54s.[7] Analysts' projections of linear viewing to 2028 indicate a continuing decline across all age groups, with younger audiences' linear viewing decline evening out and older audiences' decline becoming steeper (and with the strongest rate of decline predicted among audiences 60-64).[8] At the same time, broadcaster VOD

[4] BARB, individuals 4+, linear broadcast avg. weekly reach (15+ min) (Oct 2022 – Sep 2023)
[5] BARB Establishment Survey, DTT households (excl. YouView, BT Vision, TalkTalk, Plusnet) with no cable, satellite, IPTV or broadband (Q3 2021 vs. Q3 2023)
[6] In this document IP means Internet Protocol. IPTV is TV delivered over the internet. It includes video on-demand (VOD) and linear, live, scheduled content. We also use online TV and internet-connected TV to mean the same thing.
[7] BARB, avg. weekly time per head (HY 1 23/24 vs. HY1 22/23)
[8] 3Reasons, projections of average daily viewing 2023-2028

viewing continues to grow for all audiences from a smaller base (+29% year on year), including the older age groups (+36% year on year among 55+).[9]

Smart TVs now make up over 70% of primary TV sets and are projected to account for 96% of all primary sets by 2032.[10] Overall, 81% of primary set TVs were connected at end 2022, and this is projected to rise to over 87% by end of 2027.[11] All this evidence points to the conclusion that, led by audiences, internet-connected TV is already mainstream and is on the path to becoming ubiquitous.

## We are now in a phase of hybrid distribution but there is evidence of rapid movement towards IP consumption in all demographic groups

Research shows that the highest proportion of people use a range of services to watch TV, combining broadcast linear television with video-on-demand and online video services.[12] BARB data also indicates that only 14% of the UK population watch only broadcast TV, 29% watch only VOD, and 49% watch both.[13] Just as the move from analogue to digital did 20 years ago, IPTV offers audiences greater choice of services and content. Competition between traditional platforms (e.g. Freeview, Sky), new platforms from technology companies (e.g. Google TV, Amazon Fire TV, Roku) and TV manufacturers' own platforms (e.g. Samsung, LG) now provide a mix of linear, live, on-demand, free, ad-funded, and subscription-funded propositions, which offer ever-more personalised ways of accessing TV content to meet audiences' needs. Global technology companies and TV manufacturers have taken the opportunity to heavily promote and preference their own streaming services to generate revenues through advertising and subscriptions, further shaping audience expectations for choice.

Given that IPTV is a relatively new phenomenon (entering the market around 2010), a surprisingly high number of households across all demographics watch at least some content via the internet on a connected TV set. The clear majority of UK TV households (70%) already use the internet to watch content on their TV set on average per week, 81% do so on average per month, and 89% do so over the course of a year.[14] Viewing via the internet is higher amongst some age groups, with 35-44s most likely to watch online on their TV on average per week (77%), but even amongst 65-74s the figure is 51%.[15]

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[9] BARB, avg. weekly time per head, individuals 4+/55+ (HY1 23/24 vs. HY1 22/23)
[10] 3Reasons (2023)
[11] 3Reasons, projections of internet connected TVs incl. via smart TVs, set top boxes, streaming devices, games consoles (2023)
[12] Johnson et al., "Ways of Watching: Categorising television viewers in the age of streaming" (2023) 53% of TV viewers in the UK watch the full range of available services, from linear broadcast channels, to VOD, pay-TV and video streaming services
[13] BARB, avg. weekly reach 15+ min (HY1 23/24)
[14] BARB, avg. weekly, monthly and annual TV household reach 15+ min, long-form VOD and video sharing on the TV set (2022/23)
[15] BARB, all individuals, avg. weekly reach 15+ min, long-form VOD and video sharing on the TV set (2022/23)

Younger audiences (16-24 and 25-34) are more likely to watch TV content via the internet on non-TV devices, particularly on smartphones, though a large part of this viewing is short-form content and video sharing.[16] However, the majority of these audiences also watch internet TV/video on their TV set (59% and 74% in the average week, respectively).[17] This shows that although many audiences still do much of their TV viewing via broadcast, the vast majority have the means and capability to watch online and at least occasionally choose to do so.

The majority of viewing will be via the internet, rather than broadcast, in the foreseeable future – it is estimated to account for close to 40% of all long-form TV viewing this year and is projected to reach 50% by 2026[18]. If this figure was to include viewing of short-form content via the internet on the TV, which is growing rapidly, the total share of internet viewing would be even higher.

## An increasing number consume TV only over IP

A large majority of homes are hybrid but a significant and increasing number are choosing not to use a DTT, satellite or cable connection at all. Today, 20% of homes receive TV only through the internet and this is expected to rise to around 50% by 2030.[19]

This rapid growth of IPTV-only homes has important implications for the BBC and PSBs because we know that in these homes PSB services receive 10-20% of the average levels of viewing overall depending on the PSB (i.e. 80-90% less) and only 2-3% of the average levels of live TV viewing seen across all TV homes.[20] This is in part due to the absence of a traditional linear programme guide (an EPG) on most IPTV platforms and services, which underscores the critical role that a platform UI – and in this case, the absence of a linear grid – plays in shaping viewing behaviour.

## There remains a significant, but reducing, group that watch only via DTT

At the same time, as Ofcom points out, there is a significant group of people who still rely on DTT to watch TV and these tend to be the most vulnerable audiences. It is important to understand the makeup, attitudes and behaviours of this group to ensure they do not get left behind as the TV market and majority of audiences move towards IPTV. To do this, we must first distinguish audiences who rely on DTT and are truly at risk of being left behind, from those who use DTT but are either already transitioning

[16] 51% of 16-24s and 44% of 25-34s watch long-form VOD and video sharing content on their smartphone. BARB, avg. weekly reach 15+ min, (NB. measurement of in-home usage via the wi-fi router only) (2022/23)
[17] BARB, avg. weekly reach 15+ min, long-form VOD and video sharing on the TV set (2022/23)
[18] 3Reasons (2023)
[19] 3Reasons, % of TV households that only use the internet to connect their primary set TV (2023 vs. 2030 projection)
[20] 3Reasons analysis of BARB viewing data (Q1 2022)

towards viewing via IP or are likely to do so organically in the future. According to BARB, there are currently 15.1m homes that have a DTT connection in the home on any TV set.[21] The majority of these are able to watch TV via the internet in addition to an aerial. It is estimated that 72% of homes that use DTT on their primary TV set are already connected and by 2030 that number will increase to 80%.[22]

Of the 15.1m homes that have a DTT connection in the home, only 3.3m rely solely on DTT and don't have cable, satellite, or IPTV.[23] A further 1.3m of these 3.3m homes - or 4% of all homes - also don't have a broadband connection and are the most at risk of being left behind on the path towards digital transition.[24] However, the size of this group has decreased by 20% since 2021, and as audience behaviour continues to evolve and adoption of broadband and IPTV to increase, we expect this number to reduce significantly over the rest of the decade.[25]

Furthermore, analysts project that the number of homes that use DTT on their primary TV sets and are unconnected (i.e. either don't have a broadband connection, or have a broadband connection but have no connected devices / have not connected their devices) will decrease from 3.2m (11% of all homes) today to 2m (7% of all homes) in 2030.[26] In question 3, we discuss how to manage this risk to ensure no one is left behind.

## Live and scheduled linear TV remains popular

There is still a significant audience segment that consumes mainly or only live TV and scheduled channels via a traditional linear EPG. We see evidence of this in high levels of linear viewing among older audience groups that also watch significantly more hours of TV than an average viewer. Audiences 55+ watch, on average, 29h 23m of linear broadcast TV on average per week – twice as much as an average viewer (14hrs 38min among all audiences 4+).[27] The majority of BBC TV content (82%) is still viewed on linear TV and 18% via iPlayer (87% vs.13% across all broadcasters),[28] and BBC linear broadcast TV reaches half (50%) of the UK population every week.[29]

[21] BARB Establishment Survey, total households with DTT connection on any TV set (Q3 2023)
[22] 3Reasons, estimate for primary set DTT-only homes which are connected via STB, IPTV, streaming devices, or games consoles (2023 vs. 2032 projection)
[23] BARB Establishment Survey, DTT households (excl. YouView, BT Vision, TalkTalk, Plusnet) with no cable, satellite or IPTV (Q3 2023)
[24] BARB Establishment Survey, DTT households (excl. YouView, BT Vision, TalkTalk, Plusnet) with no cable, satellite, IPTV or broadband (Q3 2023)
[25] BARB Establishment Survey, DTT households (excl. YouView, BT Vision, TalkTalk, Plusnet) with no cable, satellite, IPTV or broadband (Q3 2021 vs. Q3 2023)
[26] 3Reasons, projections of DTT-only homes (incl. YouView, BT Vision, TalkTalk) which are unconnected either with no broadband connection, or with broadband connection and no connected devices (2023)
[27] BARB, avg. weekly time per head, (HY1 2023/24)
[28] BARB, share of viewing, linear broadcast/iPlayer all devices (HY1 2023/24)
[29] BARB, 4+, average weekly reach 15+ mins, BBC TV linear broadcast (HY1 2023/24)

Recent research carried out by Silver Voices also indicates that more traditional expectations persist. It points to the 'cultural moments and common frames of reference' provided by live, linear TV and radio. Even on smaller screens where there is no linear EPG, audiences are still seeking out and watching live TV content via IP - 17% of the UK population (4+) watched live TV channels through iPlayer on small screens on average per week between January and October this year.[30]

A major driver of live TV consumption is big events. Of all programmes watched at the time of broadcast in the past year, the top 65 were all live transmissions.[31] The top 5 most watched live programmes on TV over the course of the past year were the FIFA World Cup broadcasts (the matches of England vs. France 19.4m, England vs. Senegal 18.4m, England vs. USA 15.1m, Wales vs. England 16.6m) and the Coronation of TM The King and Queen Consort (an average audience of 11.9m for the ceremony on BBC One alone).[32] But these big events are also increasingly viewed via IP - live or via catch-up. Online viewing of the 2022 World Cup on the BBC increased by 57% compared to the 2018 World Cup, and there were 105m episode requests for the 2022 World Cup on iPlayer and the BBC Sport website and app (against 66m in 2018).[33] The BBC coronation-related programming received a total of 14m online viewing requests to watch across BBC News online (20% of all online viewing requests) and iPlayer (80% of all online viewing requests) including the signed, no commentary, accessible commentary and ultra HD versions.[34]

Overall, the organic migration of audiences towards the internet for content that would have traditionally only been viewed live over broadcast shows that audience expectations are not about the means of delivery but about replicating the viewing experience. Those expectations can be met either by broadcast or IPTV and is the reason PSBs are investing in Freely (see the box on page 14). Assuming that a traditional TV experience can only be delivered by broadcast risks isolating those who are currently unconnected with a second-tier, restricted experience while the majority gets a better service (including access to all BBC content) delivered via the internet.

## Overall audience expectations of TV are evolving

Most audiences continue to believe that PSB content should be prominent and easy to find on everyone's TV - 70% agree that programmes from BBC, ITV, Channel 4, and Channel 5 should always be easy to find (only 8% disagree).[35]

[30] BARB, 4+, avg. weekly reach (15+ min), live iPlayer simulcasting of BBC linear TV channels (Jan-Oct 2023)
[31] BARB, 4+, av. audience, live viewing on the TV set (Nov 22-Oct 23)
[32] BARB, 4+, av. audience, live viewing on the TV set (Nov 22-Oct 23)
[33] BBC AV Analytics
[34] ibid
[35] MTM research on PSB UI Prominence, 1,000 UK adults aged 16+ who use the latest models of any of Sky Q, Samsung TV, Google TV, Amazon Fire TV or Freeview Play to watch TV on their main TV set (July 2023)

But, in other ways, audience expectations in all demographic groups have been significantly shifted by the capabilities of the internet and rapid growth of the on-demand TV market. Most people now expect not only to be able to watch scheduled TV channels but also to explore on-demand content. Services like iPlayer, ITVX and Netflix mean that audiences now take for granted the ability to watch what they want, when they want. They expect to be able to continue watching where they left off (on multiple devices) and in the case of ad-funded services, they expect to be able to pay to watch without ads or to supplement the content they have access to with subscriptions. BBC research has shown that audiences value features such as box-sets (including access to archive content), live restart, and searching for titles with ease. More frequent users access iPlayer on more devices, including the mobile app where they can download content to play on the move, and value recommendations based on their viewing history.[36] These features are not supported by DTT, which is not able deliver a personalised user experience (as we discuss below and in the response to Question 3).

BBC qualitative research found that audiences fall into two main types of TV viewing behaviour, defined as much by their navigational preferences as by their taste in content: first, those who primarily watch linear TV and resist on demand ('linear loyalists') and second, those who mostly watch on-demand TV ('linear exiles').[37] Linear exiles appreciate the greater choice and control of the online TV experience, whereas linear loyalists see fewer choices and the more structured format of the EPG as less overwhelming and offering greater control. Both groups describe agitation when watching TV in a way that goes against their natural viewing behaviour, which suggests that audiences care more about the TV experience satisfying their need state than the means of distribution. For linear loyalists to feel at home in an IP world, the experience must offer familiar navigational preferences and simplicity of the linear EPG otherwise their need states will not be met. These findings shed light on how we can ensure a successful transition of broadcast-first audiences to IP, but more research is needed to test the assumptions. We discuss this more below in the section on Freely and in our response to Question 4.

## There are important demographic differences in people's experience and expectations of internet TV

Although there is evidence of the trend towards IP distribution of TV in every demographic, there are some important patterns which we will need to address to maintain universal distribution. For example as Ofcom's own data shows older, disabled and less well-off people are most likely to be reliant on broadcast (with 34% of DTT-only individuals age 75+ and only 6.8% aged under 16).[38]

[36] BBC qualitative research iPlayer perception tracking
[37] Blinc for the BBC. Bringing linear viewers to IP: Translating linear behaviours, qualitative research (2021)
[38] Ofcom, Call for Evidence on the Future of TV Distribution, p.7 (2023)

Recent research examining how viewing has changed since 2019 found that viewers clustered around three distinct ways of watching TV: all-watchers (53%), free-watchers (30%), and subscribers (17%). Free-watchers were most likely to be associated with watching linear broadcast TV and to use linear methods to find new content, and least likely to subscribe to SVOD and were very unlikely to use pay-TV and TV on-demand. They were significantly older than other groups (average age of 58), more likely to be white and had the lowest average household income of our three groups.[39]

Because we are committed to universality, it is a priority for the BBC to work with these audiences, the groups that represent them (such as Age UK and the Digital Poverty Alliance) and academic experts to understand these trends and how we can overcome them to ensure no one is left behind in the move from broadcast to IP distribution. We discuss this more in our response to Question 3.

## Only internet TV can meet all audience expectations

The live, linear experience is not uniquely linked to broadcast; it can and is also delivered online for example on services such as Sky Glass, on FAST (Free Ad-Supported TV) services such as Pluto TV or within broadcasters' online services (Ofcom found that three quarters of people they surveyed knew that live channels could be found in BVOD services).[40]

We recognise the huge value to audiences of easy access to free live TV – currently delivered to around 15m homes through Freeview and Freeview Play and approximately 1m via Freesat[41] – and the need to ensure that it extends to everyone, whether they are in broadcast-only, internet-only or hybrid homes. Everyone TV is planning a 'next-generation platform' proposition for connected TVs called 'Freely' which will extend this offer to hybrid and internet only homes for free for the first time (see the box on p14 more details).

Importantly, while the internet can meet the audience demand for live, linear TV, DTT cannot meet the widespread demand for choice, flexibility and personalisation that has been generated by the growth of VOD services. Only TV delivered by the internet is able to fulfil the full range of audience expectations and we must be audience-led in our decisions about future distribution. We discuss the unique benefits of IPTV – particularly in terms of accessibility – in Question 4.

[39] Johnson et al., "Ways of Watching: Categorising television viewers in the age of streaming" (2023)
[40] Ofcom, Media Nations UK 2023, p.27 (2023)
[41] 3Reasons (2023)

## IPTV can also meet expectations for universal TV services

Silver Voices' report reinforces how much people value the universality of PSB services. We also know that eight out of ten UK adults believe in the mission of the BBC[42]. Ofcom's research shows that one of the most highly valued societal benefits of PSB is that 'services are available to everyone'[43].

Universality is vital and is at the heart of the BBC's mission as well as our strategy to deliver value for all. This won't change, but the way we achieve it will. For the last decade, this need has been met by terrestrial television which covers 98.5% of the population and satellite which covers 98%. But over time, the level of broadband connectivity in the UK will increase to provide universal access not only to television but other internet services. Three quarters (75%) of UK premises are now able to access a gigabit-capable connection, with the aim of 85% by the end of 2025 and full nationwide coverage by 2030[44]. This has the potential to provide a distribution network that at least equals DTT in coverage and facilitates universal PSB services equivalent to Freeview and Freesat today. We discuss the implications of this more in Question 2 and 3.

[42] BBC, BBC Group Annual Report and Accounts 2022/23, p.2
[43] Ofcom, Public Service Broadcasting: Omnibus survey findings, p.6 (2020)
[44]Department for Levelling Up, Housing and Communities, "Levelling Up White Paper," Commitment to 'nationwide' gigabit capable broadband (i.e. at least 99% of premise) (2022)

### The Launch of Freely in 2024

ETV is planning a next-generation platform proposition for connected TVs called Freely. From 2024, for the first time, British viewers will be able to easily access all PSB channels and services for free, regardless of how they connect their TV device.

Integrated into TV devices in partnership with manufacturers and operating-system providers, Freely will allow internet-connected viewers to browse channels just as they do now but with a more modern and intuitive programme guide, using innovative functionality to explore new shows and a greater range of content.

For more traditional audiences, Freely will offer a simple and familiar TV viewing experience that is better than broadcast. Audiences will be able to access linear TV channels via a prominent TV guide and remote control buttons, and navigate up and down between the channels as they do on traditional broadcast EPGs today. They will also have easy access to accessibility features such as subtitles and audio description (via IP, DTT and in due course, satellite).

For innovation-minded audiences, Freely will deliver new routes that bridge linear and on-demand viewing (via the miniguide) and via enhanced discoverability experiences. Freely devices can be updated once they are in the market and so it is anticipated that the platform to develop over time, delivering innovative new features post-launch. These are likely to include personalisation features such as recommendations and continue watching functionality, and greater visual richness in line with some of the competitor offerings already in market.

Freely has the flexibility to evolve in multiple directions and is positioned to support the medium and long-term needs of all audiences to ensure everyone is able to receive the best free TV experience regardless of any changes to transmission technology.

## QUESTION 1 - SUMMARY

### *Key Evidence*

- *Linear broadcast viewing is declining and IPTV is already mainstream. The majority of viewing will be online in the foreseeable future.*
- *Most households are 'hybrid' - they watch at least some TV online.*
- *About half of households will be IPTV only by 2030 but only about 7% will be DTT-only and unconnected (more likely to skew older, less well-off and to have a disability).*
- *Audience expectations have shifted in line with the evolution of on demand TV services and most people take for granted internet-enabled choice, flexibility and features.*
- *Live linear viewing remains popular especially amongst older groups and especially for PSB content.*
- *Linear viewing is already possible online and will be boosted by Freely from next year.*
- *Only online TV can meet all audience expectations and deliver all BBC services to everyone in the long term.*

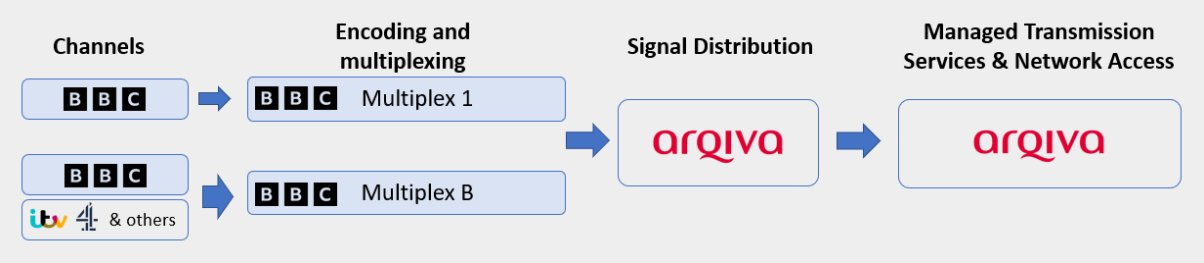
### *Further Actions*

- *The BBC together with other broadcasters and Ofcom should track trends in online and broadcast viewing in all demographics to understand pace of change and differences between different audience groups.*
- *The media industry and infrastructure providers should work to improve understanding of audience expectations - to what extent are people's expectations met by the means of delivery rather than the nature of the TV experience.*
- *ETV and its PSB shareholders should continue development of Freely to meet all audience needs and expectations.*

## Question 2: What do audience trends mean for the financial prospects and sustainability of TV distribution platforms, and what are the key decision points over the next ten years?

The BBC's overriding aim is to maintain a universal service which provides something for everyone in the UK, supports the creative economy by creating demand for a diverse range of UK-made content and is financially and environmentally sustainable. It does not aim to support any particular means of delivery or set of suppliers. Rather, the future of TV distribution should be driven by meeting the right conditions for universality. As the audience trend towards IPTV and away from broadcast viewing continues, DTT will become less sustainable and less affordable for broadcasters. We expect a tipping point in the coming years where the cost per head of DTT and DSat distribution is no longer viable for one or many of the broadcasters that currently collectively make them viable. We want to understand better the relationship between operating costs, regulatory obligations and coverage to assess all options for the future of DTT and DSat. We also want to understand whether these networks could be scaled back to be more cost effective while still providing useful coverage. But we are clear that it doesn't make sense to commit now to increasingly expensive networks with limited potential to improve services for audiences when internet platforms are already keeping pace with audience demand and have the potential to offer the full range of high quality services universally.

### Digital Terrestrial Television ('DTT')

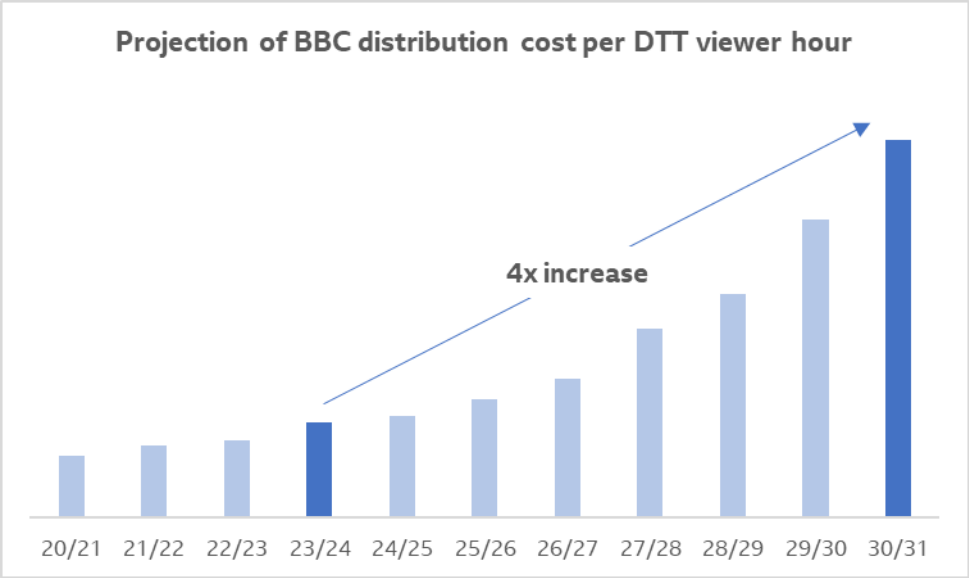



*Simplified view of the BBC's role in the DTT distribution chain* (Source: BBC)

### DTT will represent poor value for money in the future

As audiences move away from DTT it will increasingly represent poorer value for money. If we assume that linear viewing hours continue to decrease in line with trends observed over the past few years, that the take-up of IP platforms continues to increase, and that the cost of DTT remains broadly fixed in line with our contractual commitments, even

without inflation the cost per DTT viewer hour in 2030 will be around four times higher than it is expected to be in the financial year 2023/24.




*BBC analysis based on contractual commitments and viewer hour projections based on available data and assumptions* (Source: BBC)

It is projected that the number of homes that use DTT on their primary TV sets and are unconnected will decrease from 3.2m (11% of all homes) today to 2m (7% of all homes) in 2030.[45] As the number of households that rely on DTT continues to reduce, the BBC will need to consider whether the amount of licence fee income that we spend on DTT is appropriate given the size of this group. The BBC has a duty to provide value for money to all licence fee payers, and it is clear that in the 2030s DTT is unlikely to represent good value for money.

The current cost efficiency of the network is based on a number of different broadcasters with different business models sharing costs. If one or more broadcasters cease to broadcast via DTT as a result of fewer viewer hours, prices would be pushed up for anyone remaining or Arqiva's own business model may come under pressure.

## There are options to reduce the cost of the DTT network, but each comes with significant trade-offs

The potential options below would reduce the overall cost of the DTT network, though none of these decisions could be taken by individual broadcasters alone and would require coordination across industry, regulators and government.

[45] 3Reasons, projections of DTT-only homes (incl. YouView, BT Vision, TalkTalk) which are unconnected either with no broadband connection, or with broadband connection and no connected devices (2023)

### 1) Reduce coverage of DTT

The BBC's two multiplexes (along with Multiplex 2 run by D3&4) broadcast from approximately 1160 sites reaching 98.5% of the population. The majority of the complexity and therefore cost is in reaching a small proportion of the population living in harder-to-reach places. Around 80 transmitters are required to reach about 90% of UK households. The remaining transmitters are needed to reach the final 8.5%. These 1080 transmitters represent approximately 60% of the cost of operation.

Reducing the number of sites and therefore coverage to closer to 90% would significantly reduce the cost of operating a DTT multiplex. However, given the BBC's commitment to universality this could only be done if there were suitable alternatives in place to ensure audiences could continue to access BBC services.

Ofcom is well-placed to coordinate an industry exercise (drawing on data from the BBC, ISPs, Arqiva and others) to understand the intersection and gaps in coverage between broadcast and internet distribution which would enable planning to ensure full coverage.

### 2) Reduce number of multiplexes

The DTT network includes six national multiplexes. Reducing the number of multiplexes would reduce the capacity of the DTT network resulting in broadcasters having to reduce the number and/or quality of channels they make available via DTT. This would save direct costs (e.g. electricity) and avoid potential costly transmitter replacement, but in terms of the overall cost of the network, it will not represent a significant reduction such that DTT will remain viable for the long term. These factors will need to be considered as part of any multiplex licence renewal.

## Investing to increase the capacity of DTT will have some benefits, but these are limited in the long run compared to IP

The services that DTT can offer to audiences are limited by both technology and capacity compared with the internet. Upgrading some or all of the five DVB-T multiplexes to the more efficient DVB-T2 standard would increase the overall capacity of the DTT platform.

Adding significant additional capacity would enable either new SD channels to be added to the platform or existing SD channels to upgrade to HD (only PSB channels are currently available in HD on DTT). However, revenues generated by multiplex operators are declining and we saw limited use of the interim multiplexes COM7 and COM8 (now closed) for HD channels. Therefore neither seems likely to be supported by broadcaster demand given the financial implications in terms of engineering costs as well as the

impact on audiences as those with older TVs will not be able to receive DTT signals transmitted via T2[46].

Even with increased capacity, DTT as a technology is incapable of delivering the level of viewing experience that IP offers. The investment required by the industry and government to upgrade DTT to T2 would have a much bigger positive impact on audiences if spent on IP platforms, internet infrastructure and user support. We talk more about the suitability of internet distribution for meeting evolving audience expectations, including giving audiences access to additional linear channels and UHD content, in our response to Question 4.

Upgrading some of the five DVB-T multiplexes to DVB-T2 while maintaining the existing channel line up on DTT may enable the closure of one or more multiplexes where that capacity is no longer required. As above, we do not believe that closing multiplexes would result in significant savings especially given the additional costs of upgrading DTT to T2.

## There are multiple decision points for DTT in the next 10 years

### 1) Renewal of Multiplex B licence in 2026

The BBC's current Multiplex B Licence runs until 16 November 2026. Legislative changes introduced in 2021 were designed to allow the BBC to defer the option to extend the licence until closer to expiry in 2026 in order to allow for a more informed decision about the specific role of Multiplex B in the DTT platform.

### 2) Renewal of Multiplex 1 licence as part of BBC Charter Review in 2027

Multiplex 1 has a Wireless Telegraphy Act licence and is controlled by the BBC Charter and Framework Agreement. It is dependent on their renewal. The BBC's Multiplex 1 Licence runs until 31 December 2027. As part of the BBC Charter Review process we will need to determine the length of extension of the Multiplex 1 licence. It is important that licence fee payers are not committed to funding the costs of Multiplex 1 for longer than it is in their interests to do so.

### 3) Arqiva contract

We note that Ofcom's call for evidence states that stakeholders should consider the "long-term role DTT could play in delivering for audiences beyond 2034 when the current national multiplex licences expire". We would like to clarify that the BBC's multiplex licences (as detailed above) have not been extended to 2034.

[46] 3Reasons - Forecasts suggest that in 2030 there will be 0.2m DTT homes with a T1 receiver as their primary TV set and 0.9m DTT homes with a T1 receiver as their secondary set

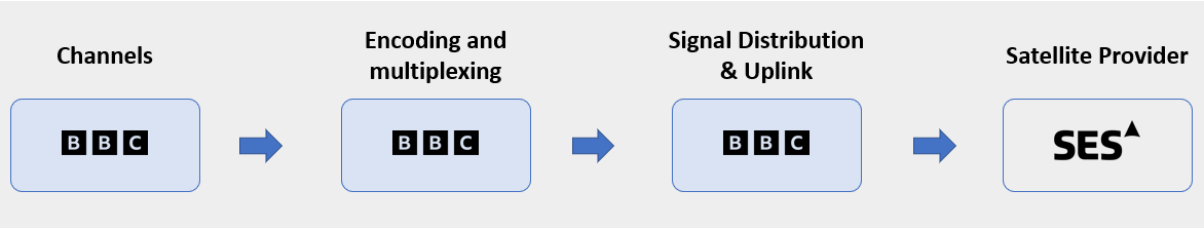
### 4) WRC and spectrum

The future of DTT could be determined by the availability of spectrum which is governed at an international level by the World Radiocommunication Conference (WRC). The BBC's position strongly remains that a 'No Change' outcome from WRC23 is the only way for the UK to ensure it retains control of its TV ecosystem and distribution approach, which will allow us to carefully time and manage the transition from broadcast to internet distribution for the benefit of audiences (including some of the most vulnerable groups), for the creative sector, and the UK as a whole. At the time of writing, in advance of the end of WRC-23, we continue to believe that a deferral of this decision to a future WRC would be in the interests of the UK.

We believe that WRC-31 is the appropriate time for that discussion; should a decision be made before then, increasing international pressure from neighbouring countries and others to reallocate the spectrum that is currently reserved for broadcasting could lead to the UK acting prematurely.

There may be financial value to alternative uses for the spectrum currently used for DTT. At the right point in time and subject to making suitable arrangements for PMSE (see our response to Question 5), a transition to all internet distribution will negate the need for this spectrum for content distribution, enabling Ofcom to explore those alternative uses.

## Digital Satellite Television (DSat)




*Simplified view of the BBC's role in the DSat distribution chain* (Source: BBC)

### DSat is more scalable than DTT, but will also represent poor value for money in the future

Unlike DTT, where the BBC is licensed to operate its own transmission networks, SES operate the network and the BBC leases capacity. This arrangement means that the BBC has more flexibility in scaling up or down the service it offers via DSat.

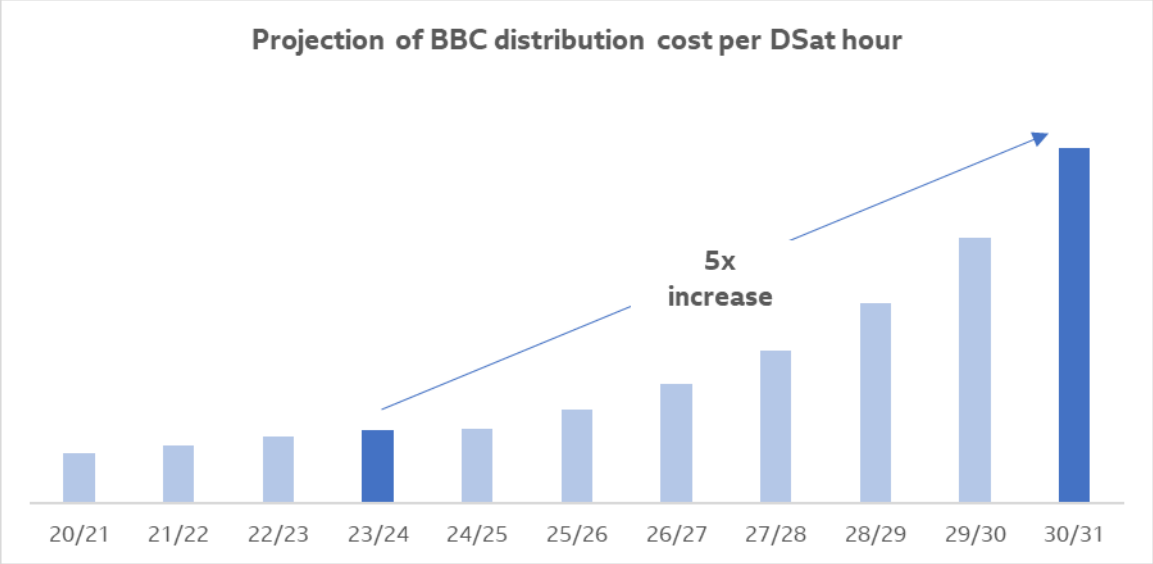
The transponders leased by the BBC provide coverage to 98% of UK homes. The same signals make BBC services available on both the Freesat platform (which is the primary

method of viewing in c.1.2m households[47]) and the Sky DSat platforms (which is primary method of viewing in 6.2m households[48]).

The BBC spends significantly less on DSat than DTT for a similar level of coverage. The cost of DSat scales according to volume of channels rather than the breadth of coverage.

80% of the BBC's cost is as a result of carrying 16 regional variants of BBC One. As signals cannot be isolated to specific regions of the country, additional capacity has to be leased for each variant.

However, over time, much like DTT, DSat will represent poorer value for money. If we assume that linear viewing hours continue to decrease in line with trends observed over the past few years, that the take-up of IP platforms continues to increase, and that the cost of DSat to 2030 remains in line with what we pay today, then even without inflation, the cost per DSat viewer hour in 2030 will be around five times higher than it is expected to be in the financial year 2023/24.




*BBC analysis based on contractual commitments and viewer hour projections based on available data and assumptions* (Source: BBC)

As noted above, Sky viewers make up the majority of the DSat audience. We know that Sky audiences are migrating away from DSat to IP driven by Sky's strategy to migrate them to their IP platforms - Sky Glass and Sky Stream, but we don't know at what pace this is happening.

[47] 3Reasons (2023)
[48] ibid

## There are decision points for DSat in the next 10 years

### 1) End of existing SES contract

In order for any meaningful extension we understand that SES need to launch a new fleet of satellites. We expect SES to begin discussions in 2025 to understand the BBC and others' future demand for satellite capacity. Without a clear plan for digital transition this may be difficult to determine.

The future of SES's business model in the UK is unknown to the BBC. We rely on SES to sell us capacity which may become relatively less attractive to them compared to other uses for their satellites over time. We understand there may be flexibility in the way they use newer satellites which could be helpful.

### 2) Potential Sky exit

We do not know if Sky has plans to exit DSat. We know that they are migrating customers away from satellite and towards IP but we do not have any visibility of the pace, timeline or outcome of this change. It is possible that Sky will choose to exit DSat within the next five to ten years, in which case there are both commercial and technical implications for other broadcasters:

- Any move by Sky to exit DSat would materially reduce the audience for DSat broadcasts and could challenge the viability of the Freesat platform. Commercial broadcasters may not believe that it is financially worthwhile for them to continue to be on the platform.
- Due to technical dependencies between Freesat and Sky, the BBC and other PSBs would also have to invest to reengineer their own systems to ensure that they could continue to provide their channels on the platform.
- Any move by Sky to exit DSat may lead SES to conclude it's no longer viable to provide a satellite service for just the PSBs.

It is therefore essential that we have an agreed plan with Sky and the wider industry for whether, how and when we exit DSat in a coordinated way.

## DSat has potential as a 'nightlight' for unconnected audiences during a future transition

Because the cost of DSat scales according to the volume of channels rather than breadth of coverage, DSat could have a role as a 'nightlight' service during a transition from broadcast to internet distribution. In the event of a DTT switch-off, DSat could temporarily fill in gaps to help maintain universal access to BBC content.

For audiences, the equipment required to receive satellite signals (i.e. a satellite dish and set top box) means it is not necessarily straightforward to switch. But some viewers consuming via satellite now do so because they are not covered by DTT and/or

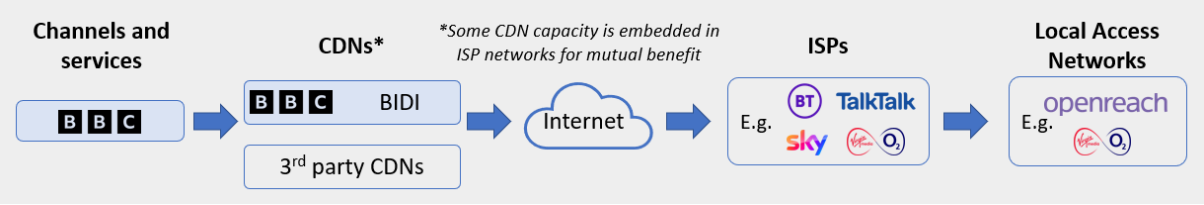
broadband and this could continue to be a relatively convenient option for some audience groups.

Further work would need to be undertaken with the wider industry to understand whether a DSat nightlight is both feasible and desirable from a technical, commercial and audience perspective.

### Cable

BBC services are also available via Virgin Media's cable TV service. The BBC makes its channels available to Virgin to distribute via its proprietary cable network to customers of Virgin TV platforms.

### Internet/IP




*Simplified view of the BBC's role in the internet distribution chain* (Source: BBC)

*This diagram does not include managed platforms (e.g. Sky Glass) where the BBC provides its channels and services to platform providers who are then responsible for ensuring the channels and services are available on their platforms.*

## The supply chain for IPTV distribution is more complex than DTT or DSat

Internet distribution of TV has a more complex distribution chain than DTT or DSat in terms of the number of parties involved and contractual relationships.

As a content provider, the BBC has commercial relationships with a number of CDNs (Content Delivery Networks) to provide the capacity required to distribute our content and services over the internet to our audiences. The BBC also operates its own CDN, BIDI, providing first-hand information on the technology developments that are driving rapid improvements to efficiency and sustainability. In 2022/23, 34% of BBC traffic was delivered via BIDI. This approach of using a mixture of our own CDN as well as third party CDNs, provides a cost-effective and flexible way of distributing our content with the ability to scale up to meet demand for larger events. A continuing competitive CDN market is essential to deliver good outcomes for the end user.

We discuss internet distribution in more detail in our response to Question 3.

## The cost of IP distribution is increasing but we expect it to stabilise

IP distribution costs grow because of consumption (a reasonable proxy being video viewer hours) and during the current growth phase the overall cost of internet distribution to the BBC is increasing. We anticipate that as the transition from broadcast

to IP distribution stabilises, so too will the IP distribution costs. While the unit costs for IP distribution have fallen significantly over the past decade, the rate of decline is now slowing. It is too soon to predict the level at which the cost of IP distribution will stabilise.

## Net neutrality rules are vital to maintain an open internet and protect PSB

The net neutrality rules have ensured – and should continue to ensure - an open internet in the UK. These important principles should be preserved and enshrined in legislation.

We recognise the need to maintain investment in broadband networks to deliver nationwide coverage even during times of peak demand. The BBC welcomes Ofcom's recent statement on net neutrality and agrees that there is no justification for introducing a charging regime for content suppliers. We strongly support the need to ensure that traffic carried across networks is treated equally. Slowing down or prioritising some traffic over others could stop audiences from accessing PSB content due to costs and undermine the objectives of PSB.

## A managed move to IP distribution could bring considerable benefits

### 1) Benefits for audiences

A managed move to IP distribution is the only way for the BBC to be truly universal. It will mean that all of our audiences can access all of our TV services – whether linear or on-demand – for the first time. Free from the capacity constraints of broadcast distribution we could offer our audiences more linear channels and better-quality channels in UHD. The capability of IP distribution means that we can develop new features and services that are personalised to an individuals' needs beyond what broadcast will ever be able to offer. We discuss this more in our response to Question 3.

### 2) Benefits for the UK creative industries

Rather than paying billions of pounds to maintain broadcast distribution indefinitely, UK PSBs could be investing in British content and services to boost the UK creative economy, keeping the industry at the forefront of the world. We discuss this more in our response to Question 5.

### 3) Benefits for the nation

Motivation is the main barrier to getting online, alongside affordability, availability and ability. The transition to IPTV (and online radio) will encourage more people to embrace digital, leading to a universally connected and skilled Digital Britain. We discuss this more in our response to Question 4.

## The benefits of IP distribution are not a given; they will only be realised though planning and collaboration

A successful transition is not guaranteed and therefore neither are the benefits described above. Without careful management the transition may:

- Happen either too fast – leaving audiences behind – or too slow – placing unnecessary costs on audiences and denying them the best level of access and choice.
- Be determined by those who have a financial interest in either broadcast or internet TV distribution (e.g. owners of broadcast infrastructure or vertically integrated media giants who own internet delivery platforms, TV OS, devices and services). This is unlikely to deliver full benefits to the UK and audiences.

A move managed in the interests of audiences, the UK creative economy and UK overall is likely to deliver much wider benefits and will not leave anyone behind. The BBC and UK PSBs are uniquely placed to be at the heart of this, but it is vital that it is managed through a collaborative effort across multiple industry sectors, government and audience groups. We discuss this more in our response to Question 6.

## We need to do more collaborative work to understand when distribution tipping points could arise

To fully answer Ofcom's question about the sustainability of different distribution methods and to understand when financial and technical tipping points will arise will require a managed, collaborative process to agree solutions including (but not limited to):

- How PSBs individually and collectively provide services that meet the needs of all audiences online;
- Securing confidence in the universality and robustness of internet networks and connected devices to enable audiences to consume these services;
- Shared industry understanding of how to scale back and ultimately wind down DTT and DSat networks coordinated with take up of internet TV in a way that is affordable, safe and does not leave gaps;
- Fair allocation of costs in a way that protects audiences (e.g. from diversion of investment from content to infrastructure) and supports competition within supply chains (i.e. does not give any one supplier or set of suppliers an unfair advantage);
- A fit-for-purpose regulatory framework to ensure access to the full range of PSB free to air content is prominent, accessible and discoverable well into the future.

The significant challenges and complex inter-related decisions associated with the different methods of distribution above shows that it is vital to approach the shift in a controlled, sequenced way to ensure that all parts of the supply chain remain viable as long as they are needed to reach audiences.

## Meeting conditions is more important than setting a timetable

As shown above, we have already reached a point, in terms of market development and audience behaviour, at which indefinite support for DTT is no longer possible to guarantee. The proportion of audiences who rely only on DTT is declining and the long-term benefits of moving audiences to internet TV far outweigh the costs of maintaining multiple distribution networks. However, we think it is too early to set a timetable or make predictions about switch-off dates. More important is to agree a set of conditions that we work towards as a pre-requisite for a successful managed move.

The BBC believes that these conditions are:

- **Everyone is Connected** – everyone has a reliable, fast internet connection through which they can access all the video and audio services they want.
- **Everyone has Access to High-Quality Content** -Everyone has access to affordable 'un-gatekept' platforms and devices where they can easily find a wide range of services, whether that be video, audio or news – and they have the skills and motivation to do so.
- **Everyone Benefits from a Fair and Prosperous UK Media Economy** – There is both a healthy market for content providers – supporting business models that drive growth and investment in British creativity – and a competitive distribution environment where every part of the supply chain is robust and sustainable.

The sooner broadcasters, the wider industry and government can achieve these conditions, the greater the benefits for all. In our response to Question 6 we discuss how we should approach this through planning and coordination.

## Environmental sustainability is also an important consideration

Ofcom's question is about the sustainability of TV distribution platforms in the widest sense, but we think it's important to look particularly at environmental sustainability.

A move away from broadcast distribution has the potential to reduce broadcasters' energy use and carbon footprint. However, more work is required to understand to what extent this will be offset by the energy consumption of increasing internet distribution and how this can be minimised.

Carbon reporting and environmental assessment of different modes of TV distribution are emerging areas for the BBC and other broadcasters. The BBC has committed to and

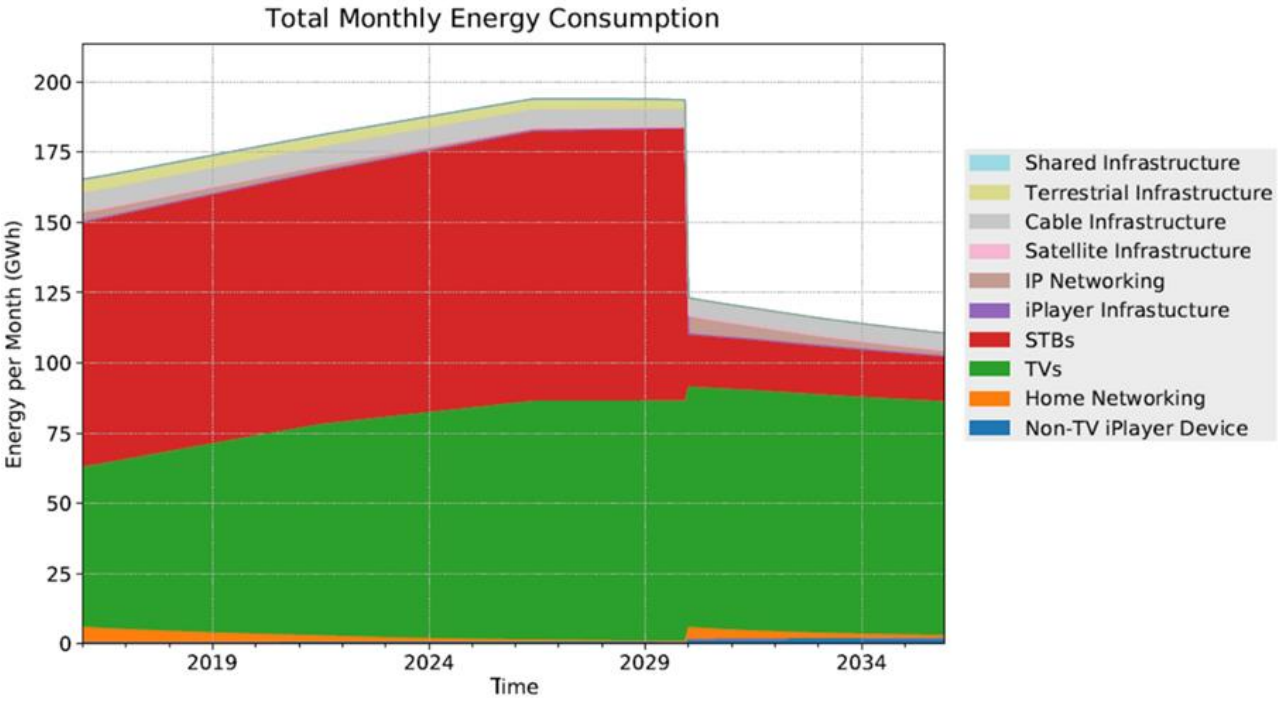
is working towards Science Based carbon reduction targets for purchased goods and services including all BBC transmission services of 28% by 2030-31 against a 2019-20 baseline.[49] Measuring the carbon footprint of IP-delivered TV is difficult due to its complex supply chain and, unlike DSat and DTT, energy usage that fluctuates in line with audience demand.

However, delivery of TV content is not the whole picture because it does not account for the environmental impact of how content is consumed. This is why BBC R&D measure the BBC's distribution-based energy use in three areas: preparation, distribution and consumption. The energy impact of DTT, DSat and IP TV varies widely in each of these three areas. For example, the spend based analysis of DSat *distribution* (i.e. the delivery) shows it to be one of the more energy-efficient ways of delivering TV content. However, this is turned on its head by the *consumption* of DSat, particularly through pay-TV DSat set-top-boxes, which are very energy-intensive. In fact, energy from pay-TV DSat set-top-boxes in the home is the single largest contributor to carbon emissions in the TV supply chain.[50]

R&D's research shows that it is this area of the distribution chain – consumption – that makes the biggest contribution to energy output across the board because existing consumer equipment uses far more energy than the equipment used to distribute the content, regardless of the distribution method. Wi-fi equipment, connected TVs and set-top-boxes are all high-energy use devices, which overall make up the biggest part of emissions from TV-watching online[51]. The Carbon Trust puts the current carbon footprint of one hour of video on demand streaming at 55g CO2e with the viewing device typically responsible for the largest portion of this[52].

BBC R&D have modelled a purely theoretical scenario to show the potential impact on emissions if the BBC stopped distribution via DTT and DSat in 2030. The graph below shows the total monthly energy consumption of preparation, distribution and consumption of BBC TV services, broken down by type of equipment. BBC R&D modelled various scenarios, such as increase in the number of TV households, bigger screen sizes and improved energy efficiency of equipment. This modelled scenario shows a hard cut-off with an immediate drop in energy consumption. (In reality, this shift would be gradual as consumers change their behaviour in anticipation of any switch off.)

[49] BBC, https://www.bbc.co.uk/sustainability/
[50] BBC R&D WHP 372: Using Behavioural Data to Assess the Environmental Impact of Electricity Consumption of Alternate Television Service Distribution Platforms 2020 (Updated June 2021)
[51] BBC R&D WHP 372: Using Behavioural Data to Assess the Environmental Impact of Electricity Consumption of Alternate Television Service Distribution Platforms 2020 (Updated June 2021)
[52] Carbon Trust, Carbon Impact of Video Streaming




*Scenario 1:Total monthly energy consumption of preparation, distribution and consumption of BBC TV services without DTT or DSat TV* (Source: https://storyplayer.pilots.bbcconnectedstudio.co.uk/experience/rd_sustainability)

Taking into account preparation, distribution and consumption this indicates that emissions could be cut by over a third, despite increases in energy consumption from home and internet networking as a result of a move to IPTV only.

These are high level estimates modelled for a scenario which is neither possible nor desirable and does not take into account wider environmental impacts such as the embodied carbon in equipment manufacture and disposal. But it does show the potential environmental benefits of broadcasters reducing the modes of distribution they use. Combined with improvements in the energy efficiency of equipment required to deliver the internet and increased procurement of renewable electricity in the next decade, this could result in significant reductions in emissions for the UK broadcasting sector.

There is a need for important further research to understand the scale and timelines of potential environmental benefits, the optimal way to achieve them and how to minimise the overall ongoing emissions of TV streaming. We would like to work on this with other broadcasters, suppliers of broadcast and internet technologies, consumer equipment manufacturers and experts such as the Carbon Trust.

## QUESTION 2 - SUMMARY

### *Key Evidence*

- *The cost of operating DTT multiplexes is largely fixed, so as audiences move away from DTT, the cost per viewer hour increases by around four times resulting in poorer value for money, especially if some broadcasters decide to exit DTT.*
- *Reducing the number of DTT sites could significantly reduce operating costs but it would also reduce coverage. Reducing the number of multiplexes or channels may not make significant enough savings to be worth doing.*
- *Recent legislation gave Ofcom and broadcasters flexibility to ensure negotiations over future DTT multiplex licences are good value for money and make the right decisions for audiences. We should use this flexibility.*
- *We have argued for 'No Change' at WRC23 – the only way for the UK to retain control of its TV ecosystem and distribution approach for as long as needed.*
- *DSat is considerably cheaper than DTT for a similar level of coverage but it is used in far fewer households and, because further investment is needed and other leaseholders may exit satellite, its value for money is also likely to reduce in the future.*
- *Internet distribution has a more complex value chain than DTT or DSat. Our IP distribution costs have and will increase with consumption but we expect this to stabilise over time.*
- *No amount of investment in DTT or DSat will match the viewing experience that internet TV can offer in terms of choice and features. Investment in IP networks would have a much greater impact but we need coordinated cross-sector action to realise this benefit.*
- *It is vital to maintain and strengthen the rules of net neutrality to ensure that audiences can freely access PSB content online.*
- *A move away from broadcast distribution has the potential to significantly reduce broadcasters' energy use and carbon footprint.*

### *Further Actions*

- *Ofcom should coordinate an industry exercise (drawing on data from the BBC, ISPs, Arqiva and others) to understand the intersection and gaps in coverage between broadcast and internet distribution.*
- *PSBs, Sky, SES and others should make an assessment about future options for DSat.*
- *Ofcom should coordinate a managed collaborative process with infrastructure providers and their customers, including the BBC, to identify future technical and financial tipping points for different distribution methods and the solutions required to manage their impact on audiences.*
- *BBC and wide media industry should continue research to understand the scale and timelines of potential environmental benefits from reducing the number of TV distribution networks, the optimal way to achieve these benefits and how to minimise the overall ongoing emissions of TV streaming.*

## Question 3: How do broadband networks and supporting infrastructure need to evolve to support resilient delivery of TV over the internet in the future?

IP distribution is vital to achieve the BBC's objective of 'Value for All' because it allows audiences to access the full range and depth of BBC services – not only all our live, scheduled services but also a much wider range of programming and features. We have identified three requirements to ensure broadband can support resilient TV delivery over IP in the future. First, the Government must achieve its aim of making high speed internet available to all premises in the UK by 2030, including those that are hard to reach. Second, policy-makers should address digital exclusion at a national level and look at targeted interventions to drive take-up of internet connections and connected devices to watch TV. Third, continued collaboration is needed across the supply chain to ensure the end-to-end internet infrastructure balances resilience, reliability and quality and keeps pace with demand, particularly for major live events. Based on the rapid rate of technical improvement in the last decade, we are confident that broadband networks and infrastructure can evolve to meet rising audience demands in the next decade. But we believe that TV offers an opportunity to go further – providing a unique incentive for people to get online for the first time, opening the door to wider digital inclusion, unlocking social and economic benefits which accelerate the development of Digital Britain.

Achieving IPTV 'levelling up' for everyone depends on three key requirements:

### 1. Universal availability of high-speed internet connections

BBC audiences access our internet-distributed TV services in the home using fixed-line broadband, fixed-wireless access and via satellite-internet services. By far the most common and practical choice of connection is via fixed-line broadband and, as Ofcom notes, broadband coverage has been steadily increasing in recent years, with 97% of premises now able to get superfast broadband[53] which meets the threshold for receiving a full, high-quality IPTV experience. Access to full-fibre broadband has jumped from 37% in May 2022 to 52% in a year[54]. Currently 75% of premises are able to get gigabit broadband, and the government aims for this to be 99% of premises by 2030[55].

The Government has recently consulted on the level of the broadband Universal Service Obligation, now set at 10 Mbps, in anticipation of a formal review being triggered by

[53] Ofcom, Connected Nations, Summer 2023 Update
[54] ibid
[55] Department for Levelling Up, Housing and Communities, Levelling Up the United Kingdom (2022)

75% of UK premises taking up a 30 Mbps service[56]. Receiving audio and video is possible for anyone with at least a 10Mbps broadband connection. To reliably receive high-quality video services requires superfast (30+Mbps) broadband.

We expect industry and Government combined action to roll out superfast and full-fibre connections to be effective in achieving this requirement alongside improving network resilience at least by 2030. We also expect the Government's Shared Rural Network plans, which aim to provide 4G connectivity to 95% of the UK by the end of 2025, to extend connectivity for those where fixed wireless access provides a more reliable experience. But we recognise that there are some very hard to reach premises and areas of the country which are not well-connected. We welcome the Government's recent consultation on this[57] and we're keen to work with industry in establishing to what extent alternative technologies such as low earth orbit satellite and 5G wi-fi dongles can help connect these premises with broadband services which support reliable video streaming to ensure that the internet coverage matches and exceeds DTT's 98.5% universal coverage.

## 2. Full take up of internet connections and connected devices to watch TV and for other uses

In light of the evidence above, we agree with Ofcom's assessment that broadband coverage will not be a significant barrier to internet delivery in the next decade. However, today an estimated 14% of households choose not to have a fixed-line broadband connection[58]. While some households supplement internet access with mobile data, 8% of households have no access to the internet at all.[59]

As more services across all industries move online, we think it's vital to understand why some households continue not to take up internet access. This challenge has much wider implications than the future of TV distribution, and also much greater potential benefits if tackled at national level. The most common reason (69%) given is that there is no perceived 'need to go online', followed by the belief that using the internet is 'too complicated' (20%).[60] Research commissioned by BT and conducted by AbilityNet said that a specific goal such as "making doctor's appointments, entertainment, applying for jobs or staying connected with family" helps digitally excluded users see the benefit of going online, whereas "abstract terms such as 'digital skills' can seem more daunting."[61]

[56] Department of Science, Innovation and Technology Digital Connectivity: Consultation on reviewing the broadband Universal Service Obligation (2023)
[57] Department of Science, Innovation and Technology Digital Connectivity: Consultation on Improving Broadband for Very Hard to Reach Places (2023)
[58] Ofcom, Communications Market Report (2023)
[59] Ibid
[60] Ofcom, Adults' media use and attitudes (2023)
[61] BT Group, Digital inclusion: New insights and finding a sustainable way forward (2023)

Internet-connected TV could motivate many people to get connected for the first time and open the way for them to build further digital skills such as searching on a browser or using video-calling, ultimately enabling them to access other services such as health or banking. There is evidence suggesting a link between the take up of internet TV and wider digital inclusion: if TV services were available solely via the internet, that could be an incentive for non-users of the internet to take up an internet connection at home.[62] A recent report by Deloitte and the Digital Poverty Alliance on the potential economic gains of tackling digital poverty also highlighted that vulnerable groups in digital poverty can often be uninterested in engaging with the digital world due to lack of trust, so incentivising digital adoption via trusted devices, services or tools could help tackle digital poverty.[63]

Cost is another reason why people don't go online, both of the broadband or mobile data and of devices. We note that many ISPs offer discounted 'social tariffs' to households in receipt of benefits[64]. Take up of these tariffs is low, and analysis by Frontier Economics for BT suggests that this is because many households either get broadband cheaper already as part of a media bundle, perceive that social tariffs wouldn't meet their requirements, or don't want or cannot afford a broadband connection whatever the price.[65] Device re-use schemes[66] also play an important part but we are also interested to see how device manufacturers evolve their products, particularly Smart TVs, to make them both simpler to use and longer-lasting. One of the benefits of internet-connected devices is the ability to update them without replacing hardware, but it's important that they are not designed to become obsolete quickly.

We broadly agree with BT's conclusion from their research on digital exclusion that policy-makers at national level should focus on the very-low-income households for whom cost is the main barrier to getting online, by prioritising and funding interventions that tackle this as a social policy problem with far-reaching consequences. We also agree that it could be useful for Ofcom to look at a wider set of measures around affordability to understand better the financial thresholds for getting online[67]. But we also agree that further, more targeted interventions are needed by ISPs, retailers, manufacturers, Government and local authorities working together with charities and social enterprises to address the issues with digital skills and confidence that stop many people from getting online.

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[62] ComRes, Digital Exclusion Research (2019) *When non-users of the internet were asked to imagine a scenario where all TV access was required to be through the internet, 37% said that they would want to get an internet connection set up*

[63] Deloitte, Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK (2023)

[64] Ofcom, Social tariffs: Cheaper broadband and phone packages

[65] BT Group, Digital inclusion: New insights and finding a sustainable way forward (2023)

[66] For example, The Good Things Foundation National Device Bank

[67] BT, Digital inclusion: New insights and finding a sustainable way forward (Blog) (2023)

There are important reasons to tackle digital exclusion at a national level, not just because of TV services but because internet access is increasingly vital to life in the UK from healthcare to social services, education and jobs. The recent report by Deloitte estimated that if the entire UK population were able to "interact with the online world fully" that "billions of pounds in benefits for individuals, government and businesses could be unlocked each year"[68]. This is alongside other benefits which are harder to quantify such as greater health literacy, personal time saved and reduced social exclusion. IPTV could incentivise people to get online for the first time, playing a critical role in accelerating our transformation into a truly Digital Britain.

The BBC wants to understand both what challenges digital exclusion could pose for a managed move towards universal online TV distribution and what role TV can play in tackling it. We want to conduct further research on the relationship between access to video content online, internet adoption and gaining digital skills so that we can help target interventions to address digital exclusion narrowly and effectively. These interventions could include, for example, training partnerships with charities or groups representing audiences, or on-air campaigns. Given the wider societal benefits of digital skills, we are interested in hearing from partners in industry and charities who would like to work with us on this.

## 3. A resilient end-to-end infrastructure for internet delivery which reliably provides a high quality, seamless TV experience

The BBC provides a reliable, seamless IPTV experience which is enjoyed by millions of people. There is already extensive video consumption online, and we estimate that between 37% and 46% of all video viewing (minutes consumed across all devices) is delivered over the internet.[69] For the BBC, IPTV consumption as a proportion of total viewing stands at 18% for all age groups, and 43% for 16-34 year olds.[70] On-demand requests make up 79% of the BBC's video internet distribution today, with live at 21%[71]. We expect both to continue to grow as more people switch to IPTV.

Distribution of on-demand content (VOD) is mature. As it is not created in real time, encoding efficiency is greater than for live streams, and simple distribution strategies can be used to improve quality of service (for example, running large receiver buffers). Network and server efficiency is continuing to improve, and we believe that will evolve sufficiently in line with global technology developments to meet demand. Linear channel and live event internet distribution is less mature, as discussed below.

[68] Digital Poverty Alliance, Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK (2023)
[69] BBC, Derived from data in the Ofcom Media Nations Report (2023)
[70] BARB, share of viewing, linear broadcast/iPlayer all devices (HY1 2023/24)
[71] BBC, BBC Group Annual Report and Accounts 2022/23, p.149

For all forms of distribution, some trade-offs are necessary between resilience, reliability and quality. We are interested in working with other broadcasters, manufacturers, ISPs and telecoms providers to understand what trade-offs are necessary to provide the best possible internet TV experience.

### IPTV requires resilience in all parts of the internet system

No system is inherently resilient or reliable; rather, these qualities need to be engineered in as part of the system design using the capabilities available within that system. For example, with DTT there are different classes of transmitter sites, with main sites serving c.90% of the population having significantly greater protections around backup systems and feed arrangements than smaller relay sites.

When considering the internet, we need to take into account the component parts of the system: home; access and ISP networks; and CDNs. While each of these presents challenges, we think they are soluble as technology develops:

- We expect the majority of ISP networks to be resilient and designed to cope with single points of failure.
- The access network to the home currently relies on active equipment, housed in street cabinets, using legacy copper wires. The move to fibre to the home should greatly improve reliability.
- Within the home there is still reliance on home routers and wi-fi access points, though we expect reliability of hardware to improve alongside more extensive distribution of higher specification routers, further usage of mesh wi-fi networks and adoption of 6GHZ wi-fi frequencies. There is a parallel here with broadcast distribution which relies on consumer aerials and satellite dishes. These are often subject to weather damage, for example, and are the responsibility of the householder to repair or replace.
- The nature of the internet means failures can be re-routed or content delivered via multiple CDNs with clients able to automatically select CDNs depending upon network conditions.

Failures outside of the engineered resilience within a broadcast DTT network will generally result in full loss of service over a geographic area. The nature of failures within an IP network can result in very different outage patterns, ranging from individual homes, to local areas, through to larger areas depending upon the network architecture.

For wireless resilience, we agree with Ofcom's recent discussion paper that by the end of this decade "'Next Generation' Wireless Broadband technologies and networks have the potential to bring significant improvements in availability, reliability, performance and choice of wireless connectivity across the UK and in countries around the world.[72]"

[72] Ofcom, Spectrum Management for Next Generation Wireless Broadband (2023)

### How content is consumed is evolving

Content consumption is evolving away from linear channels towards VOD. Drivers for this include increased demand from services such as Netflix and Disney+ that provide primarily or exclusively SVOD (subscription video on demand) content, and the ability to watch content scheduled onto a linear channel at a more convenient time through a BVOD (broadcast video on demand) service. We expect this trend to continue, with the proportion of consumption of VOD over linear channels continuing to increase.

Linear channels, released from the constraints of a broadcast network, are also evolving with innovations including:

- Personalisation (in particular personalised advertising)
- Time-shifting (such as “restart this programme”, pausing and scrubbing)
- Proliferation (FAST [Free Ad-Supported TV] and pop-up channels).

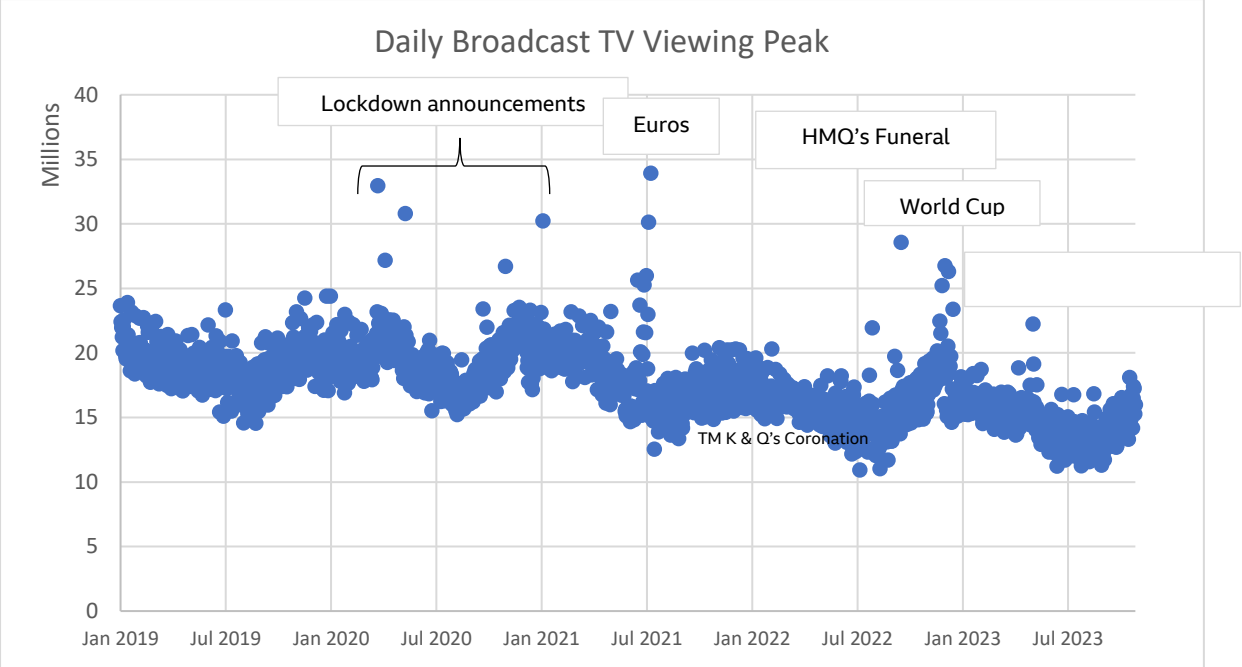
This evolution makes broadcast technologies (e.g. multicast) increasingly unsuitable for linear channel delivery, just as broadcast is not suitable for on-demand delivery.

### Exceptional Live Events may require focus

Although VOD is well supported, additional focus may be required for significant live events which have three key characteristics:

i. a large proportion of viewers watching the same content at the same time;
ii. sensitivity to latency as the timing of something in the event (such as a goal in a football match) matters; and
iii. the peak number of viewers can be considerably higher than the normal daily peak.

In addition the live streams may be provided at a different quality to the rest of the channel with which they are associated (for example FIFA World Cup 2022 and the Coronation of TM The King and Queen Consort were both provided in UHD [Ultra High Definition]).




*Daily peak concurrent broadcast TV viewers (Source: BBC, derived from BARB data) Note: peaks include all viewing not just named events*

Live streaming inherently suffers from longer latency than broadcast. Content is buffered within the client to improve resilience to network perturbations; the size of the buffer determines the level of resilience, but translates directly into increased latency.

Approaches to reducing latency for live streaming are being trialled, but further work is needed to achieve the desired balance between robustness and latency as networks' performance improves.

Resilience for major live events can be delivered with suitable capacity planning (see below). However, we consider this to be an area for further investigation across the industry, for example by using Adaptive Bit Rate (ABR) multicast. We are supporting industry with trials in this area.

### Managed vs Adaptive Bit Rate (ABR) vs Over the Top (OTT) multicast

Multicast has long been proposed as a means of carrying linear services within IP networks, and it is currently within managed UK platforms such as BT. However, multicast within the OTT context has never been deployed, with issues of network and capacity management, in-home network and wi-fi restrictions and client complexity often cited. Furthermore, audiences are increasingly expecting added-value features, such as restart or other personalisation, which always require the use of unicast technologies.

As we build an internet-based delivery system, it is critical we create fit for future services and not simply replicate the current broadcast capability. We expect this to require primarily scaled unicast capability based upon deep caching.

Industry attempts to simplify the use of ABR multicast address many of the issues above, but in order to offer a consistent BBC service these technologies need to be available from all ISPs (as our audience should receive the same service irrespective of the ISP they use).

Internet streaming over 5G presents different challenges, and it is still a topic of active research as to whether multicast has a role in distribution over 5G.

### Capacity planning can help ensure live events work well on IPTV

Resilience in video distribution over the internet into the home is dependent on sufficient capacity being available for public demand. As consumption moves online, the peaks in demand increase, and we plan to ensure adequate capacity is always available.

The data required for capacity planning is available and, as the transition to online consumption matures, it will be increasingly straightforward for video content. There are two other areas that we anticipate will need particular attention:

- A series of peaks driven by major events, such as a football World Cup;
- The impact of other traffic on the internet that may contend with video traffic.

We want to work with ISPs and other content providers to understand more about how we plan for and manage these issues to ensure capacity keeps pace with demand.

### Fault diagnosis is improved by analysis of client telemetry

We agree with Ofcom that the question of resilience is complex given the many potential points of failure between broadcaster and viewer and we note that, unlike broadcasting, there is no end-to-end contract and associated SLA for distribution.

A critical component for any internet based delivery system is adequate telemetry from the end user device. This telemetry provides real-time data on the network and CDN performance and enables the client to make choices to maintain or restore the quality of service (for example where multiple CDNs are used).

We perform analysis of client telemetry as a matter of course today, and use this for rapid diagnosis of faults down to issues with the content, CDNs, networks or clients.

Without this telemetry, which requires a software component in the client device, the ability to diagnose where the points of failure are between the broadcaster and viewer, and for the client to collaborate with the network and CDNs, are greatly reduced.

## QUESTION 3 - SUMMARY

### *Key Evidence*

- *High speed broadband, capable of supporting video and audio streaming, is rolling out across the UK to meet the Government's aim of reaching almost all premises by 2030.*
- *Broadband coverage is not matched by broadband take-up. 14% of households choose not to have a fixed line broadband connection.*
- *The most common reason people aren't online is because they don't feel the need to be. Cost and complexity are also major reasons.*
- *IPTV could incentivise people to get connected for the first time, opening the door to new online skills and opportunities, helping to tackle digital inclusion and accelerate Digital Britain.*
- *The BBC provides a reliable, seamless TV experience online, enjoyed by millions of people, currently making up about 15% of total BBC TV viewing. But overall the figure is higher, with as much as 40% of all video viewing already being done online.*
- *Networks and infrastructure for on demand viewing, which currently makes up the large majority of IPTV consumption, are relatively mature.*
- *Ensuring networks are sufficiently resilient for exceptional live events presents additional challenges around capacity and latency. Resilience is also complicated by the complex supply chain for internet delivery including potential points of failure between broadcaster and the home and within the home.*
- *No system is inherently resilient or reliable; rather, these qualities need to be engineered in as part of the system design using the capabilities available within that system. In all forms of distribution, some trade-offs are necessary between resilience, reliability and quality.*

### *Further Action*

- *PSBs should undertake research with digital exclusion experts, ISPs and others to understand which groups are especially at risk of being left behind in a transition from broadcast to IPTV, how this is likely to change over the next decade and what interventions are needed by Government and industry to address this.*
- *The same group should also research the role TV can take in driving digital inclusion i.e. the relationship between access to video content online, internet adoption and gaining digital skills.*
- *BBC and other broadcasters working with the internet supply chain (including CDNs and ISPs) should assess the balance between robustness and latency in the internet delivery of live events and research technical (e.g. multicast) and other ways to manage demand for capacity across all suppliers.*

## Question 4: In what ways might different types of 'hybrid' terrestrial and internet services deliver benefits for audiences and what risks may arise?

IPTV undoubtedly offers benefits to audiences: greater choice, quality, personalisation and flexibility in addition to familiar, traditional linear services. In fact, internet distribution is the only way to ensure all the BBC's services are truly universally available. But new technologies and services have also created risks and challenges for audiences. IPTV interfaces can be confusing and difficult to navigate, making it harder for people to find what they want. In some cases, they are deliberately designed to promote a manufacturer's or platform's own services over what they really want to watch. We must ensure that the benefits outweigh the risks of IPTV for everyone from the most tech-savvy to the least digitally experienced. That begins with a foundation of appropriate regulation, protecting PSB prominence even as technology changes. Building on that, PSBs will continue to develop high-quality IP services which are as easy to use as Freeview. The BBC will also continue to improve iPlayer (and our other online services) to be inclusive and simple to use. Internet technology allows us to set new standards of accessibility, including for those with limited sight and hearing. And it opens to the way to many more innovative features, enhancing the public value of the BBC's services overall.

### Internet TV offers benefits and risks

IPTV delivers significant benefits over DTT-only experiences: audiences are able to access a choice of subscription, ad-supported and broadcaster VOD services alongside the familiar linear Electronic Programme Guide (EPG). For the BBC, IPTV offers true universality and value for all, as it is the only way to make available all our TV (and radio) services and content for all audiences at any one time.

These benefits can be for everyone, not just the most tech-savvy. IPTV allows for greater flexibility and rapid feature implementation and therefore has the potential to deliver much more innovation and more accessibility features than traditional broadcast (we discuss the technical reasons for this in the response to Question 3).

However, the nature of some IPTV user interfaces can also undermine the traditional, familiar TV experience and the value of public service broadcasting through loss of prominence, discoverability and attribution. This risk is particularly acute when TV interfaces are owned by vertically integrated global tech businesses with control over platform, devices, operating systems and content services. They are incentivised to design the user experience primarily to advantage their business models by preferencing their own content services or third party services from whom they derive revenue share.

Analysts predict that over a third (35%) of new smart TVs will be powered by 'Big Tech'-owned operating systems (particularly Google TV, Amazon Fire and Roku) by 2032[73]. Some manufacturers and operating systems may make the EPG difficult to find or do not offer an EPG at all. Others may change their interfaces and core user journeys frequently which can confuse those seeking a familiar experience. As the line between device manufacturer, operating system provider, content provider and/or aggregator becomes blurred, some platforms are self-preferencing content on commercial grounds rather than offering UK audiences what they want and expect.

## We must take steps to ensure the benefits outweigh the risks

In the last 20 years, Freeview, Freesat and existing regulatory protections for the EPG and statutory accessibility requirements have been effective in ensuring that all audiences have genuine choice and can access their favourite channels and programmes easily. However, these protections are not uniquely required by terrestrial services; they can also be delivered and even improved online. There are four ways in which we can ensure that the benefits of IPTV outweigh the risks as the distribution landscape evolves:

### 1) Appropriate Regulation

Prominence is governed by a mesh of primary and secondary legislation and regulatory guidance. With TV technologies and audience habits evolving at pace, it's crucial that the legislative framework can keep up and that legislation is appropriate, proportionate, and feasible, enabling innovation while supporting audiences to watch great British content.

We welcome the measures in the Media Bill to introduce a new TV prominence regime for on-demand PSB services. It is vital that the Bill is now passed into law as swiftly as possible, in order to close the gap between UK audience expectations and needs, and to address the erosion of prominence of PSB TV services and content, including by global platforms.

The BBC recently responded to DCMS's consultation on the regulation of additional EPGs, welcoming Government's proposals to do so. Without regulatory intervention, the erosion of PSB on linear IPTV services is only likely to increase, as global technology companies look to increase their market share and extract value at the expense of UK PSBs.

However, we note that there are still some important gaps in legislation. For example, while the existing prominence regime addresses PSB prominence within the EPG, there are no requirements around the prominence of the EPG. While linear viewing is and will remain an important and popular method of discovering public service TV content, it is being downgraded within TV UIs in favour of platforms' own content offer.

[73] 3Reasons, Forecasts for 2023-2032, (Autumn 2023)

As we have set out elsewhere, multi-use devices such as smartphones and laptops should be included within the new prominence regime being introduced through the Media Bill and EPGs on multi-use devices should be regulated. As TV manufacturers and UI developers aim to provide a more integrated experience for audiences across different devices, there is a risk that an increasing number of UIs used to watch TV are unregulated, leaving audiences with an inconsistent viewing experience and undermining PSB prominence.

### 2) Collaboration by PSBs to create trusted internet services

As mentioned in our response to Question 3, lack of skills and motivation can be a barrier for many people to going online. And, as explained in Question 1, we know that audiences enjoy the traditional, familiar experience of broadcast TV. That is why we are working with the other PSBs to maintain the benefits of Freeview and Freesat for the internet TV age with a new IP platform Freely (see the box on page 14).

For audiences that want a traditional TV experience and are averse to change, we can make the transition online simple and invisible. TVs with Freely will work with existing DTT connections for those households that do not have an internet connection. If and when these households are ready to go online, and assuming they have bought a Freely-integrated TV set, they will have instant access to a service they are familiar with to access TV over the internet.

Freely will ensure that audiences have access to a standard EPG, adhering to a channel number policy that meets audience expectations and ensures PSB prominence. ETV has developed Freely as an HbbTV Operator Application (Op App) which delivers a uniform user experience over multiple devices such as set top boxes and smart TVs. One benefit of the Op App approach is that the functionality can be upgraded over time to respond to UK audience needs, without users needing to replace their existing TV.

By intervening in the market with the other PSBs at the platform level with Freely, we hope to set the standard for IPTV services that others will follow. However, we will need co-operation from TV manufacturers and TV operating system owners and, as mentioned above, appropriate regulation to ensure Freely is widely integrated and is made sufficiently prominent and accessible on TV interfaces.

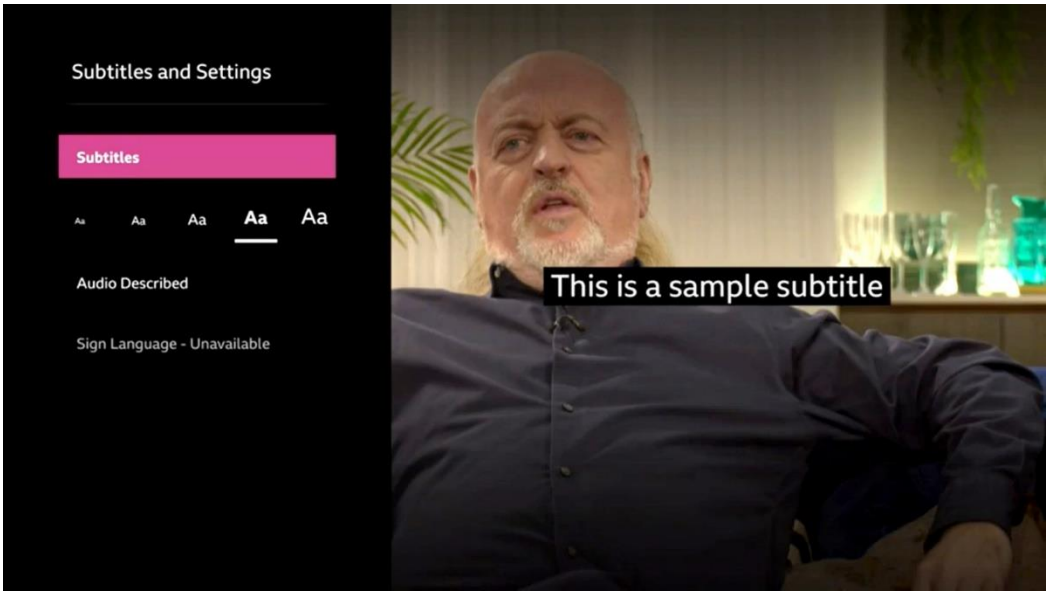
### 3) Inclusive and accessible products and services

At the BBC we are committed to the principles of Inclusive Design because products that are accessible and easy to use benefit everyone. We design all our services and digital products in a way that is straight forward and intuitive to use for people whether they are highly digitally skilled or completely new to the internet. We aim to create digital experiences that are simple enough for everyone but that also offer a full range of functionality.

As a result, we have historically set a high benchmark for accessibility[74], ensuring that our services are easy to use for those with diverse needs. For example, to meet the needs of people with limited vision or hearing, we have worked with the Royal National Institute of Blind People (RNIB) and British Deaf Association (BDA) on requirements and effectiveness. We expect all our suppliers to also meet high standards of accessibility, set out in our procurement policy[75]. By continuing to maintain the highest standards and constantly improving accessibility[76], we will raise the bar across the whole UK internet TV market.

Since 2021, iPlayer users have been able to change and control the size of subtitles and had a simpler way of choosing audio described and signed versions of programmes where they are available. In 2022-23, 86.7% of the iPlayer catalogue was subtitled, equating to 50,866 programmes. A further 8,212 programmes were audio described and 4,484 were provided with signing on iPlayer (14% and 7.6% of the catalogue respectively)[76]. We ensure that significant amounts of on-demand content is provided with access services. Recently, every episode of *Doctor Who* on iPlayer was provided with subtitles, audio description and signing. This made almost 380 hours of content fully accessible. Using the additional IP functionality of Red Button and BBC iPlayer, the Coronation of TM The King and Queen Consort this year was the most accessible live event ever with the availability of subtitles, sign language, and an alternative commentary version for people with sight loss. Viewers also had the option to watch the coverage without commentary[77].

[74] BBC, Access services at the BBC
[75] BBC, Accessibility and Assistive Technology
[76] BBC, BBC Group Annual Report and Accounts 2022/23, p.134 (2023)
[77] BBC Media Centre, BBC unveils special coverage and programming to mark Coronation of His Majesty The King and Her Majesty The Queen Consort (2023)




*Changes to BBC iPlayer on TV in 2021 allowed users to change and control the size of subtitles, and made it easier to choose the audio described and signed versions where available*[1]

In the future, internet technology will allow for even greater, personalised accessibility. For example, BBC R&D has experimented with a new feature that enables viewers to change the audio mix of a programme to best suit their own needs and preferences[78]. There are 11 million people in the UK who are hard of hearing many of whom struggle to hear elements of the audio mix. Rolling out these features - which are unique to IPTV - at scale could significantly improve the experience of our content for big sections of the audience.

We are looking at the whole user journey from finding iPlayer in the IPTV interface to signing in, to finding the content the audience-member wants and ensuring that it's accessible to everyone, including people with no/low internet skills. BBC User Experience and Design has conducted qualitative research into the attitudes towards and experiences of BBC products with three groups: older, neurodivergent, and BAME audiences. We will continue to build on this research to ensure that our online services are simple, accessible and provide value for all.

When Freely launches next year, the service will have an Ofcom-compliant accessible EPG available over IP and DTT (Channel 555). Access to this EPG and the EPG itself will continue to develop and deliver more for audiences with more complex needs. Audiences will also receive subtitles and audio description support over both DTT and IP, with scope to improve these experiences as the BBC and other parties innovate and develop our services and products.

[78] BBC Taster, Pilot: Casualty A&E Audio (2019), BBC Research & Development, Personalised and accessible audio experiences (2022)

### 4) Innovative features

As the capabilities of TV hardware have continued to evolve, access and demand for Ultra High Definition (UHD) content has grown significantly. Spectrum constraints mean that it isn't feasible to provide UHD content via our DTT or satellite services (as discussed in Question 3). However, many have already enjoyed our programming in large numbers in UHD via iPlayer in the past year. For example, 8.8 million accessed matches in UHD during the World Cup, 7.8 million watched drama series *Blue Lights* in UHD and 3.2 million our Glastonbury coverage in UHD. A further shift towards IP capability would allow us to offer more UHD content to more of our audience.

As we showed in the response to question 1, audience expectations have been changed by the availability of IPTV. We also know that the BBC's online audiences want an effortlessly personalised experience - they want the platform to do the hard work for them. Audiences can find the sheer volume of choice of what to watch challenging but we know personalisation is effective in helping them to filter and find things that are relevant and engaging. Our personalised rails (e.g. 'continue watching…' and 'recommended for you') perform well on iPlayer, accounting for 85% of clicks on the iPlayer homepage[79]. The BBC approaches this in a uniquely public service way, blending algorithmic recommendation with careful human curation, ensuring that online audiences are exposed to the same range of content as they expect on a scheduled channel, including both the familiar and unexpected.

[79] BBC data, Clicks on iPlayer homepage rails across September and October 2023

## QUESTION 4 - SUMMARY

### *Key Evidence*

- *IPTV is the only way to access all available BBC services and content.*
- *By 2032, over a third of new Smart TVs will be powered by 'Big Tech' operating systems, some of whom preference their own services over PSB.*
- *The Media Bill is vital but may not be sufficient – it will protect the prominence of PSB online for the first time but should go further to keep pace with audience needs.*
- *Freely is a PSB-led and funded platform-level intervention in the TV market that will deliver all the benefits of Freeview and more over IP.*
- *When online products and services are designed inclusively, everyone benefits.*
- *Internet technologies allow the BBC continuously to raise standards of accessibility and – unlike with DTT – there is scope to go even further in the future.*
- *IPTV doesn't suffer from the constraints of DTT, meaning that millions of people can simultaneously enjoy UHD content and find content that is both relevant and new.*

### *Further Action*

- *PSBs should continue to develop more accessibility features for audiences' different and complex needs on our own online services and on Freely.*
- *BBC, other broadcasters, platforms and equipment manufacturers should work with accessibility specialists to continue research into make the whole online user journey simple and easy to use for everyone.*

## Question 5: Given the sharing of infrastructure, what would the implications for other sectors be if there was a change to the use of digital terrestrial television (DTT)?

The masts and spectrum that deliver DTT support several other related services – notably broadcast radio, emergency communications and other spectrum users in the TV and production industry. It's vital to protect all of these services and doing so for each of them presents serious challenges. But we should work collaboratively to overcome those challenges rather than seeing them as a barrier to debate and decisions about the future of TV distribution. We are committed to ensuring BBC radio continues to be available to everyone all over the UK but we don't believe that's dependent on the indefinite continuation of DTT. Similarly, the BBC will retain a vital role in communicating locally and nationally in times of need, but broadcast is unlikely to be the best way of doing that in the future when the reach of DTT and broadcast radio is no longer universal. A move away from broadcast and towards online distribution will have significant impacts beyond TV and we need to ensure these are positive. The health of the UK's creative economy, particularly the TV production sector, depends on managing the move carefully - prioritising PSBs and their ability to invest in UK content. With the right coordination at a national level and by sharing the costs fairly, we have an opportunity to generate significant social and economic benefits for Digital Britain by using IPTV as an incentive to get people online and close the digital skills gap.

### Broadcast Radio

### The BBC remains committed to universal radio

Radio is very important to the BBC and our audiences and we remain committed to universal access to BBC Radio. We also recognise the huge value of the commercial radio sector in the UK, which is estimated to support more that £680m in gross value added to the UK economy[80]. Today universal access is underpinned by DAB and FM networks but, as with TV, we expect that ultimately radio will be distributed via fixed and mobile IP networks.

Many of the conditions that would need to be in place for TV broadcasters to be comfortable with the closure of DTT (see our response to Question 2) would enable radio broadcasters to be comfortable with in-home listening transitioning to IP. But we also recognise that there are particular challenges associated with the ways people listen to radio outside of the home which would need to be addressed to ensure universal coverage remained. Notably:

[80] APPG on Commercial Radio, Valuing Radio, How Commercial Radio contributes to the UK (2018)

- Mobile coverage of the road network needs to be suitable for radio listening, including in rural areas and in congested traffic areas;
- Vehicles without connected dashboards will need safe and user-friendly ways to access mobile services, with all live radio stations easily accessible.

We welcome the measures in the Media Bill, protecting access to radio on voice-activated devices, and believe these should be expanded to protect on-demand and internet-only content, and to cover in-car systems. There are significant benefits to broadcasters from reaching their audiences via IP and to consumers from connectivity both inside and outside the home. However, there could be differences in the timings of the TV and radio transitions which means that radio broadcasters may favour continuing terrestrial broadcast even in the event of a DTT closure.

## Radio is increasingly consumed via the internet, but this is more pronounced inside the home

At the moment, live radio reaches the majority of adults in the UK, with 88% of people tuning in for an average of 20.5 hours each week across digital, analogue and online platforms. 76% of listening is via broadcast technologies (AM/FM/DAB) and the remaining 24% is online[81].

As Ofcom note in their 2023 Media Nations Report, the way in which people are listening continues to shift online. Forecasts estimate that listening via IP will be the second most common way of listening to radio by 2030, behind only DAB.[82]

However, unlike TV, a significant proportion of radio listening is outside of the home (39%)[83]. The move to online is more pronounced inside the home where 31% of radio listening was online compared to in car where only 6% is online[84]. This indicates that audiences are moving from broadcast to online radio at a different pace and in different ways to the shift for TV.

## A move away from DTT does not necessarily mean an end to broadcast radio

The PSB DTT multiplexes operate from 1,136 transmission sites. Of these sites, 280 also accommodate BBC National DAB or FM transmitters (the majority of them are also shared with commercial FM/DAB). Therefore, three-quarters of DTT sites could be closed without any direct impact on the BBC's radio services and our broadcast radio

[81] RAJAR, Data Release Q3, 2023
[82] DCMS, Digital Radio and Audio Review (2021)
[83] RAJAR, Data Release Q3, 2023
[84] RAJAR Q1 2023

services could exist exactly as they do today if the remaining infrastructure remained accessible and affordable.

We do not believe that a move away from or even, ultimately, closure of DTT would prevent the continuing provision of terrestrial radio. Based on the information we have available, we believe that operating radio networks could continue to be a profitable business and that, even under current pricing models, there are options to ensure that it remains affordable for the radio industry to maintain radio services in the absence of DTT.

Significant further work will be required to assess the options for radio as audiences move away from or DTT and this work should be set in the broader context of the long-term future of radio distribution and include a review of the readiness of fixed and mobile networks and devices to provide a robust listening experience. We welcome DCMS's commitment to review the digital radio and audio industry again in 2026. There may also be value before then in working with the commercial radio sector (including Global, Bauer, News UK and Radiocentre) and Arqiva to share data and jointly assess the technical and cost implications of a DTT switch-off on the radio industry and audiences. It may be necessary for Ofcom to coordinate this work to ensure that information can be shared fairly.

## Wide-reaching communications

The BBC takes its obligation to broadcast in an emergency very seriously[85]. We are uniquely well placed to communicate to everyone in the UK in the case of a local or national emergency. At the height of the Covid-19 crisis when the government announced lockdowns – 23 March 2020 and 31 October 2020 – 84% of UK adults came to the BBC in a single day[86].

There are two distinct, but related, considerations for this issue:

### 1. A resilient, reliable TV and radio network

As noted in our answer to Question 3, the need for resilient and reliable broadband and mobile networks goes well beyond what would be needed for TV and radio and is of national importance whether or not there is a change in TV distribution.

### 2. The ability to distribute emergency messaging

The effectiveness of the BBC's emergency broadcast responsibilities depends not only on the BBC's ability to communicate over resilient and universal networks but also for the relevant content to be widely received. Until recently, broadcast was the only way to ensure this, and for a long time it has remained the best way, but it may not be the best

[85] Agreement Between Her Majesty's Secretary of State for Culture, Media and Sport and the British Broadcasting Corporation, s67 (2016)
[86] BBC, Group Annual Report and Accounts 2020/21, p.5 (2021)

way to do it in the future. As Ofcom notes and as discussed in our answer to Question 2, there are fundamental differences in the broadcast and internet distribution chains which mean we should not seek to replicate what is currently in place.

For the reasons described in our answer to Question 1, in the future we expect a significant portion of the population will no longer have access to devices capable of receiving DTT, FM radio or DAB and therefore emergency messaging will not be able to rely on these technologies for the reach that they provide today.

We note that the UK Government and other organisations are exploring mobile-based emergency messaging systems such as the use of SMS messages to provide information on the latest coronavirus messages in 2020 and the trial of the government's Emergency Alerts service in 2023. While we believe the BBC will continue to play a unique and vital role in communicating with the whole country in times of crisis, decisions about exactly how to maintain emergency infrastructure in the future – whether or not DTT remains in the long term – are for government in consultation with broadcasters, regulators and other stakeholders.

## PMSE

The Ultra High Frequency (UHF) band used by DTT is shared with other users, notably applications for Programme-Making and Special Events (PMSE). If the band is allocated to other uses in the future, it will be vital to find arrangements to accommodate PMSE.

The BBC is a significant user of PMSE, employing radio microphones, in-ear monitors and talkback systems at many studio sites around the UK, as well as locations for outside broadcast and news. But other UK broadcasters, programme-makers and live events also rely on similar PMSE systems in the UHF band (for example, in theatres, places of worship, community halls and conference centres, outdoor events such as Glastonbury Festival and major national occasions).

The way in which PMSE shares the band with DTT (relatively low-power PMSE devices interleaved amongst a high-power but static DTT network) lends itself to flexible, dynamic sharing which suits users of both applications. Alternative future users of the UHF band (e.g. public mobile broadband operators, and military or civil defence forces) will not present the same opportunities for sharing with PMSE, potentially jeopardising TV and film production and the staging of large, high profile events by the BBC and the wider creative and cultural sectors.

These creative and cultural sectors generate significant value for the UK as we discuss in the following section. DCMS are promoting new production hubs across the UK[87] which will support more TV and film production meeting demand from international streaming

[87] DCMS, Up next – the government's vision for the broadcasting sector, p.8 (2022)

services who choose to invest in the UK. Alongside existing production, these new hubs will require suitable PMSE spectrum.

At the moment, there is no alterative spectrum or technologies that can replace the current use of UHF for PMSE. It is critically important that decisions regarding the future use of the UHF band are made with a commitment to ensuring ongoing operations of PMSE. We acknowledge Ofcom's efforts to make the air-band available to PMSE to supplement UHF use and note from this experience that widespread harmonisation of PMSE bands is necessary to drive good equipment availability; it may not be possible for the UK to make its own way on this.

## Wider UK creative sector

PMSE is just one way in which the wider UK creative economy, particularly the TV production sector, will be impacted by decisions about the future of TV distribution.

The BBC is at the heart of the UK's creative industries. Our UK creative industries contributed more than £126bn in 2022, and have grown faster than the UK economy overall since 2010.[88] Over 60% of the BBC's £4.9bn contribution to the UK economy is generated within the creative sector.[89]

The BBC is a vital contributor to one of the UK economy's fastest-growing sectors that is internationally renowned for what it produces. The BBC is the largest single investor in original UK content reflecting stories from each of the nations and regions. The BBC spent £1.4bn on first-run UK-originated content in 2022 – 48% of UK PSB total[90] – and we are the single biggest commissioner of content from members of PACT, the UK TV and film producers trade association.[91]

An unmanaged move away from broadcast to online distribution, where the BBC and other PSBs are left to pay for legacy distribution networks would affect the BBC's ability to compete with online-only content providers. Not only would this restrict the amount we are able to invest in original content from the UK's TV production sector, it also presents a risk for engaging with our audiences in the future. High-quality, distinctive content is essential for the BBC to be able to engage audiences and continue delivering our BBC mission and public purposes.

[88] DCMS, Annual GVA estimates - annual estimates for DCMS sector GVA are produced on a lag. These estimates were released on 15 November 2023. Monthly GVA estimates for more recent years are available but should be considered preliminary results
[89] KPMG, An Assessment of the Economic Impact of the BBC, p.1 (2021)
[90] Ofcom, Media Nations: UK 2023, p.4
[91] O&O/PACT, UK Television Production Survey, Financial Census 2023, p.15

An unmanaged move would therefore limit the benefit the BBC is able to generate for the UK creative sector and, ultimately, the wider UK economy and risks threatening the virtuous circle of investment, reach, and funding on which the PSB system is based.

## The 'Digital Divide' will narrow, but must ultimately be fully closed

Ofcom points out that the take-up of connectivity will 'likely change significantly over the next 10 to 15 years' and that therefore the population gap in connectivity – or 'digital divide' - will be smaller in the future. Most of this will happen organically as broadband and fixed-wireless access become an increasingly vital utility for people in all aspects of their lives. But as we say in answer to Question 3, we think the benefits of IPTV could play a role in incentivising people to get online for the first time and accelerating this process. We want to work closely with charities and civil society organisations, particularly those representing vulnerable audience groups, to understand how we achieve this and meet our condition that 'everyone is connected'.

We agree with Ofcom's suggestion that, should there be a managed move away from DTT entirely, some narrowly targeted assistance will probably be needed to support the most vulnerable groups. However, the costs of this assistance should be met by all those who benefit and, as Ofcom says, adoption of IPTV will have 'ancillary benefits as improved digital skills and in-home connections to the internet could help to close a broader digital skills gap'. In fact, an accelerated transition to a fully-online future could drive huge national benefits. Deloitte estimates £17bn[92] pa economic gain from closing the digital skills gap in addition to the societal value to millions of people of getting online for purposes other than TV such as access to health services, work, education and banking, while also combating isolation and inequality.

IPTV could play a unique role in closing the digital divide because the offer of access to wider TV content and better services could motivate many of those who are otherwise reluctant to get online. The BBC would like to do further work, with expert economists and social scientists, to understand and quantify the benefits of using IPTV to accelerate internet adoption overall. A relatively small investment - targeted at the most vulnerable to get online through the adoption of IPTV and coordinated by government so that the costs are be met by all those who benefit - could have a wide-reaching impact on digital inclusion, and therefore deliver a significantly disproportionate economic and social dividend.

[92] Deloitte, Digital Poverty in the UK, p.6 (2023)

## QUESTION 5 - SUMMARY

### *Key Evidence*

- *Many of the conditions necessary for TV broadcasters to be comfortable with closure of DTT would also enable radio broadcasters to be comfortable with a transition to IP in the home. But there are greater challenges outside the home, particularly in cars.*
- *BBC broadcast radio services and commercial radio could exist as they do today providing a portion of the infrastructure used by DTT remained accessible and affordable.*
- *In a scenario where DTT was fully closed, operating radio networks could continue to be a profitable business. There are options to ensure that it remains affordable for the radio industry to maintain radio services in the absence of DTT.*
- *Recent events such as the Covid crisis show that the BBC is uniquely well placed to communicate to everyone in the UK in the case of a local or national emergency.*
- *We need both resilient and reliable networks and confidence that people have the means to receive communications. Reliance on DTT, FM or DAB may not meet both these criteria.*
- *High frequency spectrum for PMSE is vital to the growth of the UK's creative industries and alternatives must be found to maintain this function.*
- *PSB's huge positive impact on the creative economy, particularly the UK production sector, is at risk if the move from broadcast to online results in higher, unsustainable costs for PSB's relative to other content providers.*
- *A relatively small investment in encouraging take up of IPTV could result in much bigger social and economic benefits by helping to accelerate the closure of the 'digital divide'.*

### *Further Action*

- *Ofcom should coordinate work across infrastructure providers, BBC and commercial radio to assess the options for radio distribution, within the broader context of the long-term future of radio distribution.*
- *Ofcom should work with BBC and other users of PMSE to identify and safeguard alternative bands.*
- *BBC and other PSBs should work with expert economists and social scientists to understand and quantify the benefits of using take-up of connected TV to accelerate internet adoption overall.*

## Question 6: What coordination and planning across the value chain might be necessary to secure good outcomes for audiences and key providers over the long term?

Coordination and planning are essential to meet the conditions for a successful transition from broadcast to IP distribution as set out in Question 2. The BBC is already working with other PSBs and is committed to collaborating with the wider media industry and across the whole value-chain to ensure a positive future for TV and radio distribution. This collaboration is vital to maximise the opportunities of this once-in-a-generation shift. There is danger that if we fail to coordinate or leave it too late, decisions will be driven by the need to maintain business models shaped by outside interests rather than by the needs and expectations of UK audiences. That is why it's essential PSBs are at the heart of planning the future of TV distribution. The BBC particularly can play a unique role in convening the industry, supporting digital inclusion, communicating to audiences and building inclusive services that drive IPTV take-up. But – given that many of the issues and benefits related to the future of TV distribution go far beyond the media sector – the Government must play a cross-sectoral coordinating role.

### There is jeopardy for audience outcomes if we take action too late or leave it in the wrong hands

There is a risk that if we fail to coordinate and therefore avoid making informed, evidence-led choices about the future of TV we will leave audiences worse off - with limited choice, gatekept access to PSB and less inclusive services. Vertically-integrated tech giants have a vested interest in promoting their own content services to lock customers into their platforms and operating systems, while DTT and DSat infrastructure-owners' business models depend on the continuation of existing contracts. Neither is primarily motivated to represent audience interests or ensure no one is left behind in a future Digital Britain. Decisions about the future of TV in the UK should not be left to commercial interests dictated by foreign shareholders. If they are, we could find ourselves in a situation where PSBs are marginalised: on one hand, burdened with unsustainable costs to maintain disproportionately expensive distribution networks while non-PSBs are free to distribute online-only; on the other hand, made less prominent and less accessible to audiences.

### PSBs should be at the heart of planning for the future of TV distribution

The BBC and PSBs should be at the heart of coordination, planning and decision making about the future of TV distribution. PSBs continue to be highly valued by UK audiences and have proved themselves agile and innovative since the move from analogue to

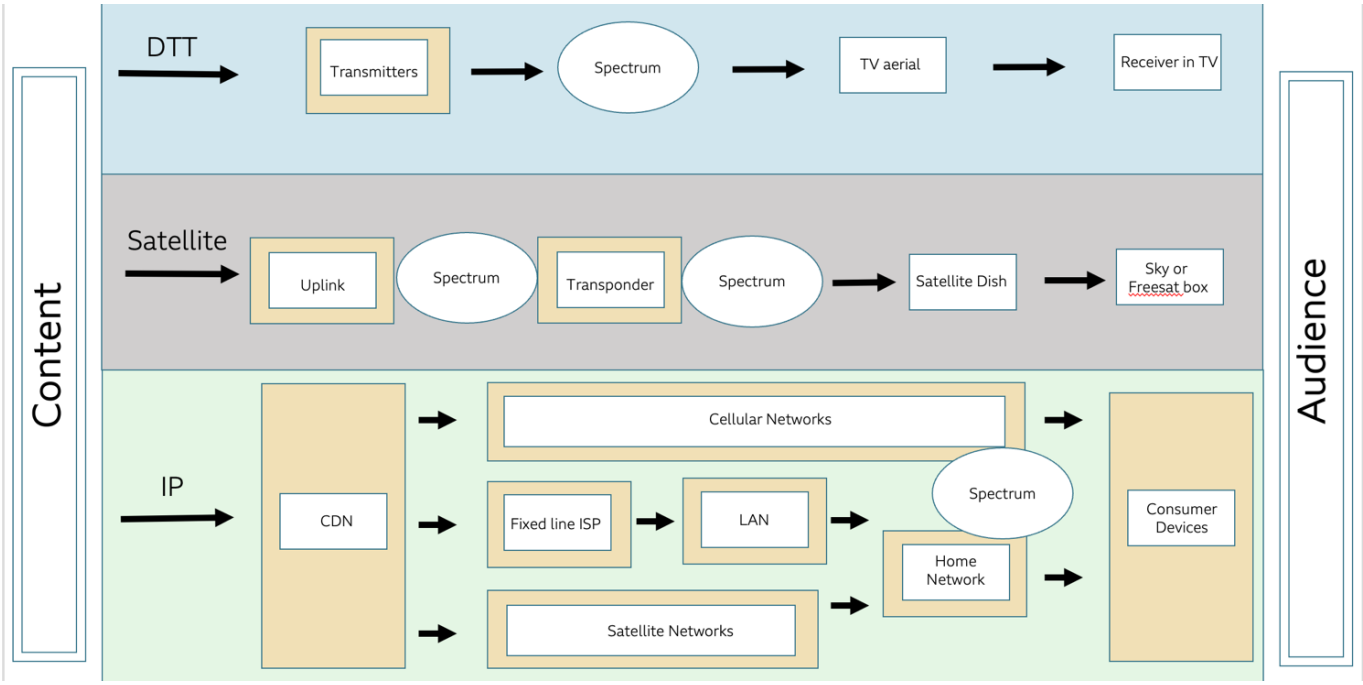
digital (with iPlayer, ITVX, Channel 4 and My5 all attracting loyal audiences). PSBs also have amongst the most to gain or lose from changes in TV distribution and have an unparalleled level of knowledge and experience in managing TV distribution networks cost-effectively and reliably. As PSBs, we are regulated to ensure that we champion audience interests and sustainable positive outcomes for the UK rather than being driven by purely commercial motives.

For these reasons, PSBs have formed a Future TV Taskforce, made up of Everyone TV (ETV) and the UK Public Service Broadcasters (PSBs): BBC, ITV, Channel 4, Channel 5, S4C and STV. The aim of the Taskforce is to work together to understand the issues associated with the future of distribution and to establish what the conditions necessary for a successful transition might be. By working together, the Taskforce will strive to develop a coherent position on these issues and the conditions in order to represent the interests of UK audiences.

PSBs have a shared interest in ensuring that the future of TV distribution is accessible and universal, delivering benefits for all audiences and supporting a sustainable supply chain from content makers to device manufacturers.

## Collaboration is needed across the whole value chain

In looking towards a digital transition, PSBs face a number of challenges in common such as managing shared infrastructure and maintaining obligations towards audiences which no individual broadcaster can address alone.




*Simplified diagram of the TV distribution value chain*

In fact, even the PSBs working together cannot succeed in securing good outcomes without working closely with a wide range of stakeholders, including:

- Audiences and groups representing audiences, particularly vulnerable audiences
- Experts on digital inclusion with knowledge about closing the 'digital divide' including charities and academics
- Broadcast supply chain (including Arqiva and SES)
- Internet Supply Chain (including ISPs and CDNs)
- The radio industry
- Global tech companies
- TV and device manufacturers
- UK, Nations and local government including agencies such as BDUK and the National Infrastructure Commission
- Other sectors also going through a digital transition such as retail banking

In some cases, we depend on these stakeholders delivering their existing commitments which will have far wider impacts than the future of TV distribution (for example, the Government and infrastructure providers rolling out gigabit broadband across the country; global tech companies making their services accessible and safe). In others, we need to work together on gathering evidence and intelligence to inform specific decisions about TV distribution (for example, with Arqiva and the radio industry to understand the options for supporting universal radio distribution; with charities such as Age UK and Good Things Foundation to understand how to support audience adoption of IPTV). In all cases, we need to collaborate and be guided first and foremost by customer and audience interests.

As we get closer to decisions about the future of TV distribution, the BBC envisages working with the Future TV Taskforce and many of these stakeholders in coordinating activity to meet the conditions set out in Question 2 and to prepare and plan for the long-term future of TV distribution.

## The BBC has a unique role to play

The BBC is uniquely placed to help convene the UK media industry and wider stakeholders to coordinate a successful future for TV distribution. We have a successful track record in leading the TV Digital Switchover and creation of Freeview in the early 2000s. We are universal, independent of commercial motivations, influential and trusted by audiences. We stand ready to work with Government and regulators to deliver what is best for Digital Britain.

There are a number of areas where the BBC can play a role, all of which can help realise wider economic and societal benefits:

### 1. Convening the industry

The TV Taskforce is ready to act on the conclusions of this call for evidence and Ofcom's advice to government to guide the future of TV distribution. In the future, the Taskforce could take on a bigger role in planning and delivering the future of TV distribution to ensure no audiences are left behind. For example, the Taskforce could lead on answering some of the questions we have raised in this response such as understanding the future value for money of DTT and DSat and better understanding the link between adoption of IPTV and digital inclusion.

### 2. Tackling digital exclusion

A managed digital transition could enable the UK to lead the way in becoming a digitally inclusive nation by capitalising on the power of TV and radio to get people online for the first time, opening the way to wider digital skills. This has the potential to accelerate the closure of the 'digital divide', which could save the UK economy billions of pounds a year, lead to better public services for all (e.g. health, education, government services) and wider socio-economic benefits such as increased earnings from digital skills and reduced social isolation[93].

### 3. Communication and messaging

The BBC is the UK's number one brand for media in the UK. On average people in the UK spend 6 hours and 9 minutes watching BBC TV/iPlayer a week – more than Netflix, Disney + and Amazon Prime Video combined. We are also highly trusted with eight out of ten UK adults believing in the mission of the BBC[94]. We are uniquely placed to help people understand the benefits of moving to online TV services and to help them assess the choices available to them to receive the content they want where they want.

### 4. Building services and platforms to drive take up

Working independently and with the other PSBs, we have a have a strong track record of creating services and platforms that incentivise people to discover and explore content in new ways. The creation of iPlayer in 2007 changed the way people interact with TV content and opened the way for other streaming platforms. iPlayer continues to evolve to meet audience expectations. Freeview and Freeview Play set high benchmarks in the industry for ease of use and accessibility which Freely will continue to do in the IPTV market.

## Government must coordinate across sectors

Many of the issues Ofcom has raised and addressed here go far beyond TV and require action to build a resilient national digital infrastructure and interventions to give people

[93] Deloitte, Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK (2023)
[94] BBC, BBC Group Annual Report and Accounts 2022/23

the skills and devices needed to get online. These are cross-sectoral issues: as relevant for the NHS, social services and retail banking, as they are for broadcasters. Others also have a great deal at stake in achieving a fully-connected UK population including ISPs and tech giants such as Google, Apple and Amazon whose businesses are entirely dependent on internet technologies. As set out above, BBC and PSBs can play a key role in ensuring good outcomes for TV distribution specifically, but Government should be responsible for coordinating the wider delivery of Digital Britain. This includes:

- Delivering on the commitment of Project Gigabit to bring 99% gigabit capable nationwide broadband coverage by 2030.
- Putting regulation in place to protect universality – through the Media Bill and beyond – to ensure sustainable prominence and prevent gatekeeping of PSB content.
- Providing funding and direct support to vulnerable audiences who lack the digital skills and / or motivation to transition to the digital world.

## The time to act is now

The BBC does not have plans to accelerate the shift to all-IP distribution or intend to set a timetable for transition. As explained in Question 2, we will only be ready to move fully to internet distribution when the conditions have been met. But we do know that audience behaviours are changing rapidly and a transition of this scale will take time, so we need to start planning now to secure good outcomes for audiences, the UK creative industries and the country. We have a track-record in successfully delivering the previous transition from analogue to digital. That transition ('Digital Switchover') was completed in 2012 but took more than a decade of planning and preparation. It was different to the transition we face now because it was more narrowly focused on TV, whereas the future of TV distribution is now just one part of a wider shift towards Digital Britain. That is why it is vital to start planning now and to coordinate not just within the TV and media sector, but more widely.

## QUESTION 6 - SUMMARY

### *Key Evidence*

- *PSBs are critical to coordination and planning because, unlike global internet platforms or infrastructure providers, they have UK audience interests at heart.*
- *PSBs have already formed a Taskforce and are ready to take on work to inform planning and decisions about the future of TV distribution.*
- *It is essential to involve the whole value chain and wider, linked sectors in a move of this scale.*
- *The BBC can build on its experience leading the Digital Switchover to play a unique role in the future of TV distribution.*
- *But the move away from broadcast and towards internet distribution is different to the Digital Switchover in that it engages much wider national infrastructure issues and also delivers much greater Digital Britain benefits, so it is vital that the Government coordinates across relevant sectors.*

### *Further Action*

- *As part of its advice to DCMS, Ofcom should commission the BBC and other PSBs, through the Future TV Taskforce, to carry out the various actions set out in this paper.*