

*Championing
excellence and diversity
in broadcasting*

Founded in 1983 by Jocelyn Hay CBE



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VLV RESPONSE TO THE OFCOM CALL FOR INPUT

The Future of TV Distribution

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INFORMATION ABOUT THE VLV

The Voice of the Listener & Viewer (VLV) is an independent, not for profit membership-based charity, free from political and sectarian affiliations. VLV supports high quality broadcasting which maintains the democratic and cultural traditions of the UK. We support the independence and integrity of the BBC and encourage work which demonstrates commitment to the principles of Public Service Broadcasting (PSB). VLV is a charitable company limited by guarantee (registered in England and Wales No 4407712 - Charity No 1152136).

Executive Summary

1. VLV's primary concern in making this submission is to represent the interests of citizens when decisions are made about the future of TV distribution.
2. **Access to Public Service Broadcasting:** We would like to ensure any changes in policy ensure that there is no reduction in access to universal, free to air, easy to access, high quality Public Service Broadcasting (PSB). PSB is more important than ever in this era of misinformation and the disruption caused by social media, because it provides an independent and trustworthy source of news, information and entertainment. It encourages social cohesion because of its wide reach as well as supporting the UK's creative economy. We want to ensure that citizens continue to have access to high quality media they can trust which is independent of political or commercial interests and which has public good as a motivation. The means of distributing this content needs to also be independent of political and commercial interests.
3. **Universality and Resilience:** VLV believes that the universality of Public Service Broadcasting (PSB) is crucial if its societal benefits are to be maintained. Currently Digital Terrestrial Television (DTT) is the only universal platform in the UK; broadband delivery of TV content has significant limitations for the foreseeable future – cyber security, lack of universality, additional costs to citizens in the form of broadband services, the cost of the additional equipment and a lack of bandwidth to ensure resilience. VLV believes that DTT should remain as the primary distribution means for PSB television for the duration of the existing licences (to 2034) and should continue beyond that date unless alternative methods of distribution can demonstrate beyond doubt that they are able to replicate DTT in full.
4. **Hybrid model:** A period of hybrid operation during the transition to full IPTV will be needed. The advantages of a hybrid approach are that there is no reduction in the universality of PSB and citizens are given the choice to subscribe to additional services if they wish to do so. It provides the greatest choice while maintaining resilience. The disadvantage of this approach is that distribution costs for broadcasters will continue to rise and this is likely to reduce the funding available to produce content which will be detrimental to audiences.
5. **Funding for Distribution:** In order to maintain the full range of existing services on DTT it may be necessary for the government to provide support to the PSBs, and possibly other broadcasters, to ensure their sustainability since distribution costs will rise. VLV considers that any funding required to support this transition period should be provided by those with an interest in making commercial returns from IPTV platforms and infrastructure.
6. **Citizen Consultation:** VLV considers that before any final decision is made on the future of DTT, the government should consult with citizens to ensure that their views and interests are being properly taken into account.

7. **Lack of Industry Consensus:** While the process of Digital Switchover was complex, the process of switching to IPTV is likely to be far more so because there are many more players involved, some of which are motivated by global rather than UK interests. VLV is concerned by the apparent lack of industry consensus about the future distribution of TV. This could lead to a negative outcome for audiences. It should be remembered that the Digital Switchover Project required industry wide collaboration, supported by government, channelled through the Digital Television Group (DTG). It took at least 10 years. Industry co-operation was essential to the success of switchover. A similar regime will be needed to plan and guide a transition to IPTV.

8. **The Public Interest:** It is important that the audience experience is determined by what is in the public interest rather than by the strongest players in the market. Therefore VLV recommends that, if it occurs, there should be a managed transition to IPTV which puts citizen needs at the heart of the process. Citizens need reassurance from the Government that there will be a universal, resilient and affordable system in place before any switchover from DTT commences.

9. **Digital Exclusion:** Until now the focus on the development of broadband infrastructure has meant that its availability, rather than its affordability, has been a key issue. VLV is concerned with the **affordability** of broadband and the impact additional costs a switchover to IPTV will have on lower income households. As the Lords Communications and Digital Committee has highlighted¹, digital exclusion is already having significant negative impacts on the population. A switch to IPTV could cause additional educational and cultural damage, not to mention democratic damage.

10. **Standardisation of Equipment:** There is now a far wider choice in hardware and software which enables viewing of TV-like content. It is important that hardware and software are standardised as far as possible, to ensure any transition for citizens is as easy as possible. This has not been the case until now, with a range of different smart TVs available, with different functions and interfaces, providing access to different SVoD apps.

11. **Risks of Personalisation:** VLV is also concerned that algorithms and personalisation on on-demand platforms have the potential to narrow audiences' horizons and exist to promote the interests of the platform owners.

Introduction

12. VLV welcomes this opportunity to respond to Ofcom's review of the Future of TV Distribution. In looking towards a period of potential change in the distribution of television and, anticipating the opportunities and threats involved, we offer some observations and comments on the matters raised in the consultation and provide a brief reminder of similar situations in the past that may be useful. We also respond specifically to the 6 questions posed.

13. VLV's primary concern in making this submission is to represent the interests of citizens and encourage policies which ensure citizens have access to high quality public service content. We do not wish there to be any reduction to free to air, easy access to high quality PSB.

¹ <https://committees.parliament.uk/publications/40662/documents/198365/default/>

14. VLV notes comments made by Lucy Frazer MP, the Secretary of State for Culture, Media and Sport, at the Cambridge Media Convention in September 2023². We welcome that despite 74% of homes now having a smart TV connected to the internet, the Secretary of State said that it is important the development of TV distribution should 'not come at the expense of those who still enjoy terrestrial television'.

Historical Context

In this section of our submission we provide some historical background which may be useful when considering the best way forward for TV distribution.

15. **DTT:** Broadcasters are not strangers to changes in technology and regulation. They have a long tradition of embracing, even inventing, new technologies for the public good. The prospects for digital terrestrial television (DTT/Freeview), delivered via radio spectrum in the UHF bands (originally 470 – 862 MHz), were reviewed in September 1990³ against a background of emerging technology. The work was initiated because it was recognised that the decades-old analogue system of terrestrial broadcasting, although the current dominant means whereby viewers obtained television, would soon be challenged by new digital technologies applied to new means of delivery together with regulatory changes. The review proposed a means whereby digitally coded television pictures could be transmitted to homes in such a way that the existing analogue and new digital signals could co-exist - "simulcast" - enabling a future transition (completed in 2012) without requiring additional spectrum. It also suggested that a digital system would support a packetised signal format (like Internet Protocol, IP) allowing a variety of services alongside television to be transmitted simultaneously.

16. **Development of Platforms:** It was suggested that Broadcasters no longer had a dominant role in determining the standards used in audio visual services because, in the future, there would be other operators providing such services by other means, e.g. videophone, videoconference and video retrieval, introducing a distinction between programme production and programme distribution and a re-evaluation of the term "television". The meaning of both terms - "Broadcaster" and "Television" - has become blurred over the intervening decades.

17. **Broadcasting:** Hitherto traditional 'broadcasting' has been the production and delivery of the same content to many receivers simultaneously in real time, according to a schedule – so-called Linear TV. Historically all parts of the system except the viewer's receiver, were managed by the broadcaster who had a dedicated, direct link to listeners and viewers. Successive stages of division have resulted in "broadcasters" being confined to programme production, having contracted out transmission and even some production. Since the 1990s a process of convergence has progressively blurred the boundaries between traditional and novel means of "broadcasting".

18. **Television:** "Television" is basically the portrayal of Moving Pictures and while once recognised widely as "Broadcast Television" it is now a term that applies to any means of viewing moving images. As far as the viewing public are concerned, the UK PSBs provide television but so do Netflix and YouTube, some of which is free to view (but with advertisements) and some subject to subscription.

² <https://www.gov.uk/government/speeches/lucy-frazers-speech-to-the-royal-television-society>

³ See paper in Proceedings of the International Broadcasting Convention (IBC) 1990, p51

19. **Content:** “Content” is a word that has become common among all providers of moving pictures as audio-visual material delivered across a range of media channels and platforms. It is the “content” that viewers wish to see and which attracts them to whichever platform best suits their needs. It is vital that the quality and range of the content, that drives the success of the UK media industry, including the PSBs, must be maintained across all distribution platforms.

20. **Prioritisation of Commercially Viable Content:** Whilst content is primarily important, there are other factors that guide viewer choice and the interest of platform providers. What has emerged over recent decades is a clear prioritisation by commercial players of sport and films as profitable streams. Viewers are prepared to pay large monthly premiums for such exclusive, commercially delivered, content in addition to PSB. The PSBs are expected to compete for viewers with these other channels which has inflated the cost of content. They are often outbid for such content while also being expected to continue providing the remaining genres which commercial players find commercially less attractive.

21. **Broadband:** As a result of the same technological advances that enabled DTT, “Broadband” was envisaged in 1990 by telecommunications operators when it was known as Integrated Services Digital Network (ISDN), a telecommunications initiative to use digital technology (similar to DTT) to exploit the dormant capacity of the telephone network to supply a wide range of services in addition to telephony. It is now in widespread use as the “Internet”, but also supports the provision of video material (streaming). It also offers broadcasters a selective delayed viewing option (Video on Demand) which provides access to archive material. Broadband is a bi-directional service providing a return path for internet interactivity and for viewers to control directly their consumption. DTT lacks a return path but for much of the time and for many viewers it is not required.

22. **Encryption:** In those early days it was noted that funding new broadband services would require a means of generating and protecting revenues through encryption. That is now fundamental to several broadband services, including cable television, as it is for commercial satellite broadcasting. It was also envisaged that, given the expansion of the number of additional services, new digital terrestrial services (DTT) may be commercial as well as PSB (BBC and ITV) and so would require encryption to protect their revenues. Indeed the very first DTT services in the UK were provided in 1998 by ONDigital, a commercial operation that issued its own receivers (set top boxes) which embodied an encryption system. Freeview was introduced in 2002 as a result of the failure of ONDigital and its rebranding as ITV Digital operating as a PSB. Of these services only DTT/Freeview is free at the point of delivery.

23. **Convergence:** Despite the passage of time, the issues facing broadcasters 33 years ago still are relevant today. Indeed the subject of this consultation is part of the continued progress of the changes predicted. The introduction of digital technology which emerged during the 1980s led to the notion of “convergence”, adapting diverse methods of service provision to become more similar, at least at a technical level. Distinctiveness is embodied in the content, not the means of delivery.

24. **Regulation & Broadcasting Standards:** Part of that convergence was the amalgamation of regulatory bodies as Ofcom, established in 2003. Another consequence was the re-organisation of the manner in which broadcasting standards were produced. The Digital Video Broadcasting (DVB) organisation was set up in 1993 after wide consultation within Europe. It has achieved global success through the adoption of its Open (rather than exclusive proprietary) technical standards including DTT.

25. **Benefit for Audiences:** All of these developments have been beneficial for audiences. We have moved from having five 'live' TV channels to hundreds of channels on DTT, in addition to almost unlimited provision on streaming video on demand platforms (SVoD) and online. This greater choice for citizens is welcome, along with the flexibility in how and when they can consume content, the ease of consuming such content and the quality of vision and audio received. These developments have also had a significant impact on the market dynamics of the audio-visual market which is now dominated by global players. The change in market dynamics – towards a more global model - is challenging for British companies which once had a monopoly. There are concerns it could lead to a reduction in the provision of culturally specific UK content and a narrower range of less commercially viable content on mainstream platforms. These are significant threats to PSB.

Response to Section 1: Overview

26. Paragraph 1 notes the traditional value that viewers place on current PSB services. In replacing the limited number of analogue services (5) by the many channels that DTT/Freeview provides, much greater choice has been made available to viewers, using far less spectrum (analogue used 392 MHz whereas DTT now uses only 224 MHz). These benefits were anticipated in 1990.

27. A direct consequence of so much choice is that viewing is more fragmented, so that many fewer people are watching the same thing at the same time. This has a direct societal consequence, emphasised where there is wider ethnic and cultural diversity among communities. There is also a clear demographic divergence notable among the younger generations. Whereas in earlier times, with limited services available, families watched and listened together, today family members often view separately, probably with little common interaction. The ability of PSB to 'bring the nation together' and encourage greater social cohesion is less evident today than it was even a decade ago.

28. It is vital for a healthy and sustainable media culture in the UK that viewers, citizens and consumers, have **trust** in media and see **value** in the services provided. In these times when there is a proliferation of opinion-led journalism and views offered as "news" on social media platforms - worse still deliberate interference or misinformation from hostile actors – there is a growing need to assure and emphasise the validity and truth of information provided through regulated public service media.

29. Not only must the sources be trustworthy, they must be seen to be so. This is a difficult task for regulators mainly because the public at large is not sufficiently aware or sceptical of the sources they use for news and information. Some will believe what they wish to believe, regardless of verification and evidence. This is a growing cultural problem.

30. Paragraph 2 recognises that Ofcom has a role in assessing technological changes and audience viewing habits. VLV also recognises these factors at play in the market, especially as they affect PSB services, and so wishes to support Ofcom in its approach to planning for the future. IPTV is already in use by many viewers alongside normal internet activity. The fact that it is popular and has been promoted by the PSBs themselves means that it must be a candidate for further development. This consultation explores the factors affecting the reality of its potential for meeting the criteria of PSB standards as represented by DTT.

31. Paragraph 3 suggests some of those factors and seeks opinion and comment from stakeholders and **consumers** (our emphasis). We note here that consultations, such as this one, are a regular feature of Ofcom's dialogue with the key players in the broadcasting industry and civil society organisations like VLV. VLV believes that the individual consumer and citizen are likely to be unaware of this dialogue. VLV considers the lack of citizen engagement by Ofcom is detrimental. An opportunity is being missed to not only hear the views of consumers, which could feed into the debate, but also to engage with individuals to educate and advise them of choices and risks.

Response to Section 2: Context for the Review

32. VLV welcomes the tone and content of the first paragraph of this section in which most of the major issues which concern VLV are raised. It is encouraging that Ofcom shares the same approach to the future of distribution as VLV does in protecting the interests of viewers and listeners as citizens. We also believe that public trust and value are vital for a sustainable future in broadcasting.

33. As envisaged 33 years ago, digital technology has significantly widened the range of distribution means available to viewers. Before 1990 all terrestrial broadcasting was in a decades-old inefficient analogue video format, delivered terrestrially by decades-old, spectrally inefficient modulation technology. The advent of digital image compression systems and new modulation methods during the 1980s challenged the limited analogue model.

34. DTT was conceived in the late 1980s, standardised by DVB in 1997 and was brought to market in 1998 in the UK. It revolutionised terrestrial broadcasting globally. Since UK switchover in 2012 it has become widely used and valued as a means of delivery. The switchover from analogue to digital was successful largely because it was recognised as a project requiring industry wide co-operation on an unprecedented scale. The Digital Television Group (DTG) was established well in advance in 1995 to set technical standards and working practices for the implementation of DTT in the UK. Something similar may be required for a transition to IPTV.

35. Other distribution means, such as commercially-driven cable TV and satellite broadcasting, new to the UK in the late 1980s, were limited in reach by the need for a subscription, among other things. These carriers were not required to provide universal coverage, only that which was commercially viable. Neither of these other means had, and still do not have, the broad reach of terrestrial broadcasting.

36. In addition, older infrastructures like the telephone network were rendered capable of supporting the "internet" – "Broadband" – offering increasing data speeds and thus eventually expanding the means of media distribution as well as its reach. It also allowed the transmission of video material by new players with varying technical qualities; typically in the early days these were far below those of broadcast television.

37. More recently corporations with vested interests, such as the mobile telephone network operators (MNOs), have suggested that DTT should be superseded by a method based on Internet Protocol (IP), which would require the re-allocation of DTT radio spectrum to them. These proposals have been met by expressions of support for DTT as an independent method of distribution, free at the point of delivery and not subject to some of the performance

weaknesses of IP systems and their commercial base. Another benefit of DTT is that it is free from potential gate-keeping interference by intermediaries. Broadband providers use similar arguments in support of replacing DTT via the erstwhile telephone network.

38. Broadcasters have responded positively to improving their technology base and have consequently contributed 168 MHz of spectrum, about 43% of its original amount, for use by the MNOs. There is no current imperative that requires the abandonment of DTT and so any suggestion that 2034 is a target to achieve that end is premature. Only an unavoidable, internationally forced decision revoking DTT spectrum and obliging the UK to close DTT seems reason enough to do so. Similarly, a positive collective decision by the broadcasters themselves could cause the abandonment of DTT after 2034. If either of these events occurs adequate notice will be required and other equivalent means of distribution need to be in place.

39. VLV recognises the current value and future potential of IPTV to some viewers. However, VLV also firmly believes that IPTV, whether offered by MNOs or Broadband, has a long way to go before it can be seriously considered as a replacement for DTT's convenience, reliability and Quality of Service (QoS) performance and, importantly, as a public service. VLV welcomes comments to this effect in this consultation. Whether improvements in IPTV technology can be made, such that a transition can confidently be considered post-2034 remains to be seen.

40. VLV understands the significance of potential changes in delivery technology to Ofcom's remit, brought about in part by the recognition by government that the broadcasting environment is undergoing radical changes. VLV is concerned that the values embedded in current UK broadcasting should not be lost during this period of change.

Response to Section 3.1: As habits change, we need to ensure audiences have access to media they trust and value for the long term

41. VLV acknowledges the several points made in the first paragraph of this section. VLV agrees that the drive towards increased IPTV delivery has potential benefits for operators as well as audiences. However, we also agree that there remain significant obstacles which will need to be overcome before a serious proposal to implement a transition to IPTV can be contemplated. Some of these obstacles are technical and infrastructural – relating to quality of service, access and reach - but others are concerned with security and reliability.

42. **Fragmentation of Viewing:** We have already alluded to changing habits among viewers and their ability to access high quality services. The evidence is clear that there are divergences in the population and among its constituent communities and generations. It is also clear that viewers are spreading their available viewing time over more outlets than before. "Viewers" use broadband for a wide variety of purposes, not only viewing video, and so consumption of video is not necessarily the main driver for the growth of broadband or that of mobile data services. VLV is concerned that the trend towards greater fragmentation of viewing will continue and increase the divergence of community values which will be reflected in eroded social cohesion.

43. **Future Viewing Habits:** We note Figure 1 with interest, especially the viewing preferences of people of 55 or older. Looking forward 10 years, as this consultation does, VLV questions what the habits of, say, a 16 year old, will be when they are 26? Similarly what will the habits of a 40 year old be when they are 50? People are living longer and some of the present generation of 70 year olds are financially comfortable and fitter, so it might be expected

that the pool of 70-90 year olds in the viewing community will expand and wish to retain their viewing habits. It is possible that there will be generational drift such that the audience for DTT will remain steady rather than decline as viewers migrate with age. In 10 years the content mix available to all age groups may not be the same as now, in ways we cannot predict. Whilst DTT/Freeview remains attractive to its core viewers, there is little or no incentive for them to change their viewing habits. Enforced change, e.g. for purely commercial or policy reasons, would not be acceptable. Any change must be with the express consent of the viewing public.

44. **Broadband Capacity:** In a typical household, a family of 4 may well consume broadband capacity independently. Even so-called super-fast broadband (>30 Mbits/s) divided among several users may not be sufficient to support viewing HDTV drama for one, gaming for another, Premier League football for a third and a film for a fourth, all viewed on high definition screens. IP networks are most stressed at peak demand times and that includes the capacity of the domestic router, the Fibre/Cable that conveys the signal and the server system that generates it.

45. **DTT Spectrum:** It is of interest that the 3Reasons forecast, cited in the consultation document⁴, suggests that even by 2032 there will still be a strong demand for DTT. This begs the question of the continued availability of spectrum to support DTT, even if technology improvements are used (e.g. HEVC and DVB-T2) to reduce its spectrum needs. Those improvements will need additional investment by broadcasters and temporary additional spectrum to simulcast during a transition period long enough to filter through the traditionally slow replacement rates of consumer receivers. Those investments will only occur if there is confidence that their benefits can be realised.

46. **Uncertainty for DTT:** VLV is concerned that without greater certainty beyond 2034, investment in DTT infrastructure and technology will decline. It is almost a self-fulfilling prophecy that if the demise of DTT is predicted, it will decline. If DTT is to be abandoned after 2034, then investment by broadcaster and viewer is not attractive and suitable spectrum to support it may not exist. Even if such a move were agreed now, 10 years may not be enough time to properly realise the potential benefits of a new system. It could be possible gradually to offload some DTT services to IPTV, in order to release spectrum, but this would require a very careful evaluation and would need to be part of the overall IPTV transition strategy anyway.

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

47. VLV understands that television consumption has been changing for some years. These changes have not necessarily been due to viewers' direct demand, but more in response to alternatives offered by new or existing players in the market. Viewers did not "demand" or "expect" DTT; the broadcasters considered it a viable and valuable change that would benefit viewers by exploiting new technologies. The same happened in the 1960s with the use of UHF to support BBC2 alongside VHF transmissions. Similarly viewers did not demand or even expect to be able to time-shift viewing until the video recorder was created and then, later, VoD arrived. Changes in broadcasting technology have influenced audience demands and expectations ever since the start of broadcasting 100 years ago. The proliferation of channels available through DTT, but also on internet based platforms, offers viewers a greatly increased

⁴ *Future of TV Distribution*, Ofcom, 17 October 2023, Footnote 13, page 7

choice and has also influenced their expectations. They now expect to be able to view whatever they want, whenever they want on whichever device is most convenient to them.

48. Changes in audience behaviour and expectations are likely to have a significant impact on the provision of PSB content. We set out some of the issues which VLV considers to be most significant below.

49. **Push/Pull Models:** VLV predicts that as technology develops, audience expectations will continue to increase as they adapt to changes which are offered by platforms. The sheer range of material available to entertain, inform and educate has enriched the opportunity for viewers to find content they want – but is this a continuously expanding trend or one that will saturate? IPTV is moving the traditional viewer “Push” model towards the “Pull” where the viewer has to make choices rather than simply “tuning in” to what is available. Ofcom research⁵ suggests that older viewers are more likely to prefer Push rather than Pull, therefore preferring traditional linear TV. Finding what one requires via the internet or on a VoD platform, usually via a “search engine”, can be daunting to anyone less familiar with its features. It is likely however that many viewers, but not all, know what they like and know where to find it.

50. **Personalisation:** The development of technology to personalise the audience’s experience is one way in which platforms and broadcasters are countering the ‘overwhelm’ factor when audiences search for content on VoD platforms. While some might welcome personalisation because it provides them with content they are already interested in, VLV has long argued that it is likely to reduce the range of content citizens consume. We are concerned that personalisation could narrow citizens’ horizons and reinforce their ‘echo chambers’, rather than broaden their understanding and perspective which PSB is intended to achieve.

51. **Misinformation, AI and Online Harms:** There is growing concern among citizens and policymakers about online harms and the power of common AI tools to misinform and misrepresent facts. Governments, regulators and societies globally are facing a significant challenge to tackle the spread of misinformation, conspiracy theories and cyber-crime. One of the outcomes of the increase in online content consumption and lack of effective regulation has been a general reduction in public trust in information and institutions, as seen during the Covid Pandemic⁶. PSB has a particularly important role to play in providing trustworthy, regulated content during this time of uncertainty.

52. **Growing Inequality:** Citizens with adequate disposable income can afford to subscribe to commercial channels, perhaps to more than one supplier. The cost can be considerable. Similarly access to TV-like content via mobile phones is growing, especially by the younger generation when they are able to afford it. The rise in the number of subscription platforms is leading to a growing inequality in society between those who can afford to pay to access content and information and those who cannot. In this context the provision of a wide range of high quality content which is free to view at the point of consumption is more important than ever.

53. **Digital Divide:** Improved access to faster internet speeds is beneficial for many, and has been instrumental in the shift towards IPTV. However, as highlighted in the 2023 Report by the

⁵ *Future of TV Distribution*, Ofcom, 17 October 2023, Figure 1

⁶ <https://www.kcl.ac.uk/news/trust-in-government-fell-in-second-year-of-covid-but-public-still-receptive-to-obeying-rules-that-restrict-freedoms>

Lords Communications Committee into Digital Exclusion⁷, there is a significant ‘Digital Divide’ between those who can afford broadband services and have the digital skills and equipment to use newer technology and those who do not. The Committee’s report highlights that 1.7 million households have no mobile or broadband internet at home, that up to a million people have cut back or cancelled internet packages in the past year due to the cost of living crisis, that around 2.4 million people are unable to complete a single basic task to get online, such as opening an internet browser. VLV notes that the Committee was critical of the Government’s strategy to tackle digital exclusion and suggested that far more should be done to minimise the trends seen in the Digital Divide. VLV notes the Government target to ensure gigabit broadband access to over 99% of households by 2030⁸. While VLV welcomes this ambition, we are concerned that if IPTV is adopted as the primary means to distribute TV, this will involve additional costs for citizens – both broadband provision and new equipment will be required to watch IPTV among those who do not currently have a smart TV or broadband access. While the focus currently is on availability of broadband services, VLV is also concerned by the affordability of such services for those in lower income households.

54. Standardisation of hardware and software: There is now a far wider choice in hardware and software which enables viewing of TV-like content. As the range of hardware and software expands, it is important from a citizen perspective that hardware and software are standardised as far as possible, to ensure the transition for users is as easy as possible. This has not been the case until now, with a range of different smart TVs available, with different functions and interfaces, providing access to different SVoD apps.

55. Social Cohesion: The ability to view content wherever, whenever you want on a range of devices has consequences for national and social cohesion which we have commented on above. It maximises the opportunity for individual, rather than collective, viewing; it increases fragmentation of viewing; and some would say it leads to increased levels of isolation in society.

56. Impacts of Increased Competition: The TV market has become increasingly competitive since the arrival of DTT and SVoD. We discuss the impacts of this further below, but there is one area where increased competition particularly impacts on PSB content. While more entrants to the market have provided greater choice in some regards, VLV considers there a risk that increased competition could lead to a narrowing of the range of high quality PSB content which is considered to be societally valuable. SVoD platforms and commercial channels are driven by commercial, rather than public service, motivations. SVoD is also generally based on a global model, appealing to global audiences. SVoD and commercial TV channels understandably focus on providing content which will be most popular: drama and entertainment. Alongside this growth in more popular content funding for societally valuable content has declined. With smaller audiences and more competition from online platforms, PSB advertising income has declined. This reduction in income, along with reduced public funding for the BBC since 2010⁹, has led to a significant decline in the volume of less commercially attractive genres of programming. As a result VLV predicts that audiences will in future have a greater choice of popular, commercially viable genres and a greater choice of ‘global’ content, but not as much

⁷ <https://committees.parliament.uk/work/7296/digital-exclusion-and-the-cost-of-living/publications/>

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052706/Levelling_Up_WP_HRES.pdf(p.183).

⁹ <https://www.vlv.org.uk/news/bbc-funding-cut-in-licence-fee-settlement/>

choice in culturally specific UK content and the less commercially viable 'at risk' genres, which are those considered by many to be the most societally valuable.

57. **Environmental concerns:** VLV notes research commissioned by Ofcom which shows that IPTV is six times more energy intensive than DTT¹⁰. Excluding the energy consumption of viewing devices, VLV understands that the per hour energy consumption for OTT was 54.3Wh – over six times higher than that for DTT (9.1Wh). This important issue will need to be taken into consideration when the future of TV Distribution is considered by the Government.

Response to Section 3.2: Industry players are looking to respond to the changing needs of audiences

58. It is clear that viewers are not dissatisfied with DTT¹¹ and are not demanding change or its abandonment. Commercial interests wishing to profit from viewers' interest in television are driving change. Broadcasters themselves have always been initiators of change enabled by technology, DTT being a prime example among many.

59. The changes seen in viewing habits and audience expectations have had and will continue to have significant implications for the future sustainability of PSB.

60. **Advertising:** Apart from the broadcasters themselves, other players have a significant role in the media mix we enjoy today. Advertising funds are not limitless and so a migration away from traditional, once extremely valuable and effective, TV advertising reduces funds available to traditional commercial broadcasters. It begs the question of regulation for advertising online and on non-traditional channels. Commercial TV is vulnerable to market led decisions like this. Over the next decade the funding models for PSB will need careful review lest commercial and other pressures succeed in reducing its effectiveness. Can commercial players guarantee longevity? Once PSB is unable to sustain its values it is unlikely they will ever be regained.

61. **Distribution Costs:** Broadcasters themselves are responding to changes in the marketplace. The PSBs are making every effort to ensure that they provide audiences with access to the content they want and need on a range of platforms; however this has led to rising distribution costs which could undermine their ability to properly fund content production. The increase in the number of target devices for their content means additional costs in preparing it for delivery by several different means to several different targets. Sooner or later the most expensive or least popular outlet will become vulnerable. The decision to distribute content in this way is that of the broadcasters themselves, but in the case of PSBs it is tantamount to a duty. That being so, a relaxation of that duty may need to be made to allow them to reduce their expenses by moving to the most cost-effective method even if that leads to a reduced audience. That could be a dangerous downward spiral and, at this time, it is not clear which method that is, and will be, over the next 10 years or more. For broadcasters dependent on advertising revenues this would be a difficult and risky decision. The BBC's revenues are fixed by government, but they provide a secure base from which to set national standards and interests. Financial pressures, either market-led or as a result of policy decisions, are real and a threat to content quality and diversity. In a commercial world prices to consumers will rise to meet costs and to protect profits. None of the PSBs have that degree of control over their incomes.

¹⁰ <https://www.ofcom.org.uk/research-and-data/technology/carbon-emissions-of-streaming-and-digital-terrestrial-television>

¹¹ *Future of TV Distribution*, Ofcom, 17 October 2023, Figure 1

62. **DTT Uncertainty:** We concur with Ofcom's comments and assessments in this section as they apply to the health of broadcaster finances. We welcome Ofcom's declared concern for Free-To-Air (FTA) services from the PSBs. We agree that planning decisions for a post-2034 scenario are complex when there are uncertainties. The popularity of DTT suggests that there is no inherent need to assume its decline in the next decade. Doing so transfers uncertainty to DTT unnecessarily, rendering it highly vulnerable to a lack of investor confidence.

63. **IPTV Infrastructure Costs:** Having said that, how much more certain is the IPTV environment? The extension of its reach beyond urban settings will be more expensive per additional subscriber who will likely be in a rural area. This extension may require novel and innovative solutions and heavy investment which itself requires the funding of a viable and profitable plan at an affordable level.

64. **Viewer-Centred Solution:** VLV considers that what viewers wish for is no reduction in their access to the high quality range of content they have become accustomed to over a range of devices. VLV considers that currently the most secure and sustainable option to maintain existing provision is DTT, although we recognise that in due course IPTV may become more resilient and be universally available which could mean a switchover is more viable, however this will involve additional costs for citizens which would be a negative outcome.

65. **Investment:** The fact that PSBs provide the bedrock of FTA services means that any starvation of vital funding will be damaging to the whole broadcasting culture. Some of this funding is needed to maintain the quality and range of programmes. It is also needed to explore, plan and execute any changes to the process of making programmes and distributing them as widely as possible. To achieve these objectives investment will be needed, which will only be forthcoming if there is confidence that time is allowed for that investment to have its desired effects and that change occurs at a pace that all players can manage. This includes viewers.

Q2: 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?

66. **Shift in the value chain:** As the dynamics in the market shift, VLV predicts that successful global platforms will become richer and UK broadcasters potentially will become poorer unless their own platforms are popular.

67. **Rising Distribution Costs:** As content producers are forced to make their contents available through an increasing number of distribution channels to maintain their reach, distribution costs rise. VLV notes that the cost to distribute content on IPTV increases as more people use it because costs are based on the volume of data consumed, however the cost to distribute on content DTT is fixed, regardless of how many viewers there are or how much content they consume. This means as more people move to IPTV and fewer use DTT, the cost per person using DTT will increase. This could lead to broadcasters considering DTT less viable as fewer people use it to consume content.

68. **Rising Production Costs due to Wider Distribution:** Increasing the number of distribution platforms where content is available also impacts on production costs. Each platform has different requirements which differ according to the quality of service standards required

and target devices; this has an impact on the costs of content production and quality control, editorial and technical.

69. **Content Production Budgets:** As stated above, the income of all the PSBs has reduced in recent years due to the changes in viewing habits and government decisions on funding settlements for the BBC. Commercial PSB advertising income has declined in 2023 - ITV predicted its total advertising revenue will fall by 8% this year¹². BBC public funding has also declined in real terms - by 34% since 2010, according to VLV analysis. These reductions in income have occurred during a period of rising inflation in the costs of production. All the PSBs have announced a reduction in commissioning of content during the past year and this will impact on their attractiveness to audiences. It is clear that the funding required by broadcasters to pay for an increasing number of distribution platforms will inevitably impact on content budgets over time. It will become increasingly necessary to divert funds for content production to pay for distribution costs. This will have a negative impact on audiences because the volume and quality of PSB content could further decline. In turn this could affect the sustainability of the PSBs in the longer term since it is high quality content which attracts audiences.

70. **Maintaining Technical Standards:** Viewers may well choose to access the content they want by the cheapest means, qualified only perhaps by the technical standards they require (e.g. U/HDTV). No content producer would wish to have its investment in high technical quality undermined. The lowest common denominator approach to technical quality, driven by cost, could lead to a race to the bottom. Without PSB/DTT to underpin distribution standards there is a danger of such a result.

Decision Points

71. One key decision point is whether PSB is still considered a valuable public asset and whether regulation might be required to define and maintain standards or whether competitive market forces are sufficient to do so. Ultimately it is viewer behaviour which will influence the outcomes for all players and, currently, that behaviour suggests that PSB/DTT, in all its aspects, is the gold standard that other distribution channels need to emulate if they aspire to universal service. They need not do so if their commercial viability is compromised by such aspiration. Whether that remains the case over the next decade is difficult to predict but what is certain is that rising distribution costs and increased competition in the market will test the viability of the value of being a PSB for the commercial PSB channels.

72. Other decision points will include Licence renewals for the commercial PSBs, Charter Renewal for the BBC, renewals of contracts between Arqiva and the PSBs, PSB multiplex licence renewals, contract renewals with satellite providers by those broadcasters who use satellite to distribute content, and any rulings by the WRC which could impact on spectrum allocation.

Response to Section 3.3: The take-up of broadband is currently a significant barrier to widespread reliance on internet delivery

73. VLV appreciates Ofcom's assessment of the current level of broadband take up. "Broadband" is a means of delivering a wide range of services to homes and businesses via telephone lines or cable (fibre and copper) using IP. It has been growing steadily in reach and in performance since its early introduction in the late 1990s when speeds (bit rates) were very

¹² <https://www.digitaltveurope.com/2023/11/08/digital-and-studios-growth-offsets-advertising-decline-for-itv/>

low compared to today and when terminal device functionality was limited and “the internet” was in its infancy. Mobile networks also provide subscribers with internet access as well as versions of some broadcast content. Both means of delivery require the payment of a subscription that includes telephone line rental or purchase of a mobile device. The latest generations of mobile telephones can be very expensive. Cost is one part of the reluctance of some members of the public to subscribe to new technology.

74. The feasibility of delivering good quality video content at low bit rates encouraged the development of broadband technology as a means of generating revenues and driving take up. The utility and benefits of broadband, as well as access to the internet have contributed to its success with the public. For as long as there is a readily accessible free to air broadcast service providing a range of high quality content, the added incentive to move to broadband delivery is limited. **VLV would consider that a strategy to weaken the former to aid the latter – a Levelling Down - is not a wise choice.**

75. The quality of service criteria for content from some sources available via broadband are not as important to the public as the content itself. However, some types of content (e.g. high quality drama, documentaries, sports and films) require much higher technical standards of performance to give satisfactory viewing on large high definition screens with multichannel surround sound. In many cases this is achievable provided that the delivery medium is able to maintain sufficient bit rate consistently and with no disruption. Bit rate is one reason why broadband take up for content viewing is not as widespread as it might be; another is that it is simply not convenient for some viewers. Broadly, broadband bit rate via the telephone network depends on the length of copper wire between domestic routers and a switch or, more recently, a street cabinet fed by fibre.

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

76. 97% of the population being “able to get” “Super-Fast” broadband at 30 Mbits/s does not necessarily mean that they do so¹³ - Ofcom research shows that only 73% of households chose to sign-up to superfast broadband despite having access to it¹⁴. If DTT content consumption were transferred to broadband, with multiple viewing sessions in a given household requiring simultaneous service, would there be enough capacity in the broadband system to support this? The prospect of gigabit broadband by 2030 (note that this is government “ambition”, not a guarantee which may need government support to achieve) will ease any capacity shortage provided it reaches directly into or very close to homes. Fibre to all street cabinets is feasible, given time and funding and with appropriate fibre quality (supporting multiple wavelengths) will provide significant capacity in the core network. Telephone wires, currently widely used for direct access to homes from street cabinets and poles, have limited potential in supporting gigabit speeds depending on their length so there are still issues with the final metres to homes which may be in blocks of flats that have access restrictions set by landlords similar to satellite dishes.

77. If a core network based on IP technology is to serve as a basic and universal means of accessing a range of services, it has to be ubiquitous, secure and reliable. Unfortunately the

¹³ *Future of TV Distribution*, Ofcom, 17 October 2023, Pg. 9

¹⁴ https://www.ofcom.org.uk/__data/assets/pdf_file/0034/249289/connected-nations-uk-report.pdf

internet, as it is experienced today, falls short, especially in its security and universal reach. Internet security is provided by service providers, e.g. banks by protecting their data, and subscribers using antivirus software on their computers (but not on their Smart TVs?), not necessarily by the network itself. It is fundamental to the internet, and IP within it, that it is Open so IPTV may need inherent security in addition to any password based access control or revenue protection encryption.

78. Resilience is important but is not the only feature that needs to be assured. Being wholly dependent on one means of delivery for all services is risky. It is apparent how vulnerable IP networks are, allowing criminal and anti-social activity to flourish. Daily examples are emerging of the ease with which criminal organisations and mischief makers can infiltrate networks. The emergence of Artificial Intelligence (AI) tools simply makes this worse because of the ease and speed with which the cloning of images and voice patterns (and potentially any other bio-metric based security – even retinal scans could be captured by AI through a mobile phone or laptop camera) can be achieved. U-Switch data¹⁵ shows that 21 million consumers reported experiencing broadband outages of three hours or more between summer 2022 and summer 2023. In Australia recently a full outage to the Optus network impacted an estimated 10 million citizens, 40% of Australia's population, for 14 hrs, affecting businesses, banking services, the health sector, telephone helplines and train services¹⁶. Wisdom suggests that before any public communication services are exposed to this kind of interference a delivery method that is more resistant to attack is maintained. Action needs to be taken to improve the resilience of online delivery systems before a full switch to IPTV is considered.

79. IPTV network topologies are different to those of DTT (although IP is present in the core delivery network). IP is, by its nature, a contested network with statistical loading leading to occasional congestion. It is clear that there can never be **guaranteed**, reliable IPTV capacity to maintain high quality broadcast content unless the delivery of this traffic is suitably protected. Broadcasters' IPTV data streams (live or delayed) vary in duration, are continuous and occupy an appropriate amount of capacity. Whilst IPTV clearly works today, scaling it to be able to serve the whole viewing population will require considerable investment. Persuading that whole population to make the necessary changes without incentivising them in their own perceived interests may not be easy.

80. Over the next decade broadband operators must adapt their quality of service standards appropriately to the categories of service they support. This may require the partitioning of network capacity so that displaced DTT services are given very high priority. They must also adapt their topologies to support a broadcast mode of distribution if they are to emulate DTT. Streaming on demand is the current broadband model, not the linear TV model of true broadcast.

81. If DTT services are to be delivered by broadband, regulators have the duty to adapt their oversight role to make sure that operators meet high standards of resilience.

¹⁵ <https://www.uswitch.com/broadband/guides/broadband-outages-uk/>

¹⁶ <https://www.independent.co.uk/news/world/australasia/optus-outage-australia-network-disruption-b2443577.html>

Response to Section 4: Internet-based delivery presents risks and opportunities for ease of use in TV services

82. If viewers' receivers are reasonably new, so-called "Smart" TVs, and equipped for internet access via domestic WiFi (i.e. broadband) then viewers can already access IPTV from PSBs and commercial sources. The ease with which this can be done varies and depends, among other things, on the viewer's competence in setting it up. Access to content using a Smart TV is often very slow and cumbersome. There is room for improvement in the speed and functionality of Smart TVs which is itself conditioned by internet congestion factors.

83. The discrepancy between the speed of access to DTT content and that via IPTV is clear to any viewers by experience and so DTT will be the benchmark for accessing content. Similarly viewers who use a laptop, PC or tablet device (iPad or iPhone say) with a state of the art browser and installed app will experience the speed of internet browsing and of accessing content available and expect it in a Smart TV. Watching HDTV material on a small screen is possible of course (provided the streams are tailored appropriately) but that is to miss the point of HDTV. Viewers will probably not wish to lose their wide screen TVs.

84. To be able to replicate the ease and speed of access that DTT inherently provides through an Electronic Programme Guide (EPG), a fully functional powerful and fast browsing facility will be needed that is agreed across the industry. How can these potentially proprietary browsing facilities be required to give due prominence to PSB content? It may be that current EPGs can be adapted to IPTV but rapid, near instantaneous response times, especially when many millions could be watching simultaneously could be difficult to achieve. It also requires a suitable core network topology. It remains to be seen whether the will exists to achieve this, considering that consumer electronics companies, traditional TV manufacturers, may be driven unwillingly towards the known products of the computer and software companies who may decide to market their own TV products as a means of expanding their access to consumers.

85. DTT offers Everything Everywhere – all content is available at the receiver. DTT has a total capacity to support 6 multiplexes each of about 24 Mbits/s capacity (40 with DVB-T2) and a number of radio and other services. Some relay stations cannot supply all this content because of limited local spectrum. This capacity is in excess of 200 Mbit/s (240 if all 6 multiplexes supported DVB-T2) and is permanent.

86. In contrast, IPTV is an on demand service and cannot easily replicate this. To do so – all content supplied to each and every domestic router with means to select the wanted service – is not consistent with IPTV methods and would not be efficient use of capacity. The data allowances under some current broadband contracts may exclude this or may be supplied, where technically possible, only at a cost premium.

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

87. Television consumption is already "hybrid", audience behaviour adapting as alternative sources have emerged. The range of that consumption is wide as is the technical quality of the services offered between the extremes of HDTV viewed on large high definition screens (with UDTV, so called 4K, being considered in the future) to amateur video material on YouTube offering DIY "How To" help.

88. Whatever happens, a dual period of operation, or a hybrid approach, will be needed in the shorter term, to ensure we have both a resilient and universal platform (DTT) alongside other platforms which citizens can subscribe to if they wish to have access to a greater choice of services (broadband online provision, SVoD subscriptions, satellite, cable etc.).

89. The risks of the hybrid approach are as follows:

- i. **Distribution costs** will continue to rise as more people use IPTV and this will impact on content budgets, as stated above.
- ii. It will exacerbate **the Digital Divide**

90. The benefits of a hybrid approach are as follows:

- i. It provides a **universal free to air service** which is an essential aspect of PSB
- ii. It provides a reliable, resilient platform in the form of DTT
- iii. It provides greater choice for citizens who can choose to subscribe to online services if they wish to do so
- iv. It provides greater short term certainty which will mean investment in DTT technology will continue and opportunities to improve services will not be missed

91. Distribution of a wide range of content across all the available delivery methods may not be practical, economic or appropriate in the longer term. A “horses for courses” approach is what viewers use when seeking “television” services, so it may be in viewers’ interests to apply this approach to distribution media to deliver content that best suits their capacities. This would require a regulatory approach that assures public good, but it is likely that it would not satisfy the ambitions of commercial players and may even disadvantage PSBs.

92. A traditional approach to this kind of situation is to “let the market decide”, which is what is effectively in place now and it may, for the time being, be in viewers’ interests by providing maximum choice. It is likely that hybrid consumption is here to stay for as long as there is real choice of delivery means and as long as viewers’ requirements for “television” are so wide.

Response to Section 5: Investment decisions for DTT will have ramifications for other sectors beyond TV

93. Content is delivered to DTT transmitters as regionally tailored streams and uses the core telecommunications network. Traditionally, before DTT, broadcasters were required to use the facilities of the GPO, later BT. Those facilities were dedicated and not shared with other traffic. They were also well secured against possible failures and faults. Arqiva now provides those network facilities, having inherited or acquired them from the previous network operators. The change of delivery method for broadcasters’ content from DTT to IPTV will affect the core network and its operator. Arqiva may be able to use its network to support IPTV’s core network. VLV is confident that Arqiva will protect its own interests in assessing changes to its network.

94. DTT transmitters are installed near the base of a tall mast, typically located on high ground, sometimes in remote places. They require protected mains power supplies. Main high power stations have hundreds of low power relays located in places of poor main station coverage. Arqiva occupies over 1,100 transmitter sites with 4,500 transmitters. IPTV via broadband has no direct use for some of these facilities (but MNOs may) and so the

transmitters and associated equipment will become obsolete. However, the masts themselves and the associated buildings house other equipment to provide other services, e.g. mobile telephony core networks. There are examples of old TV masts that continue to be useful after their transmissions have ceased. The extent of any obsolescence remains to be assessed, including the cost of writing off asset value from the balance sheet.

95. Some main DTT transmitter sites also provide radio transmissions, e.g. Digital Audio Broadcasting (DAB), which will need to remain. FM radio has its own transmitters that are not usually co-sited with DTT but some are. However, DTT multiplexes also contain national, regional and local radio signals. We note Ofcom's comments in Section 3.5 of the consultation¹⁷. A rationalisation of radio delivery may be required as part of any review of TV distribution.

96. For many years TV and radio transmitters have been unmanned and monitored remotely. Some few sites are used as maintenance bases. It is possible that the operational personnel supporting DTT will have alternative duties.

97. We note the comments concerning emergency communications and agree that they require careful thought. Whatever platform is used for emergency broadcasts, it needs to be guaranteed to be resilient. VLV does not consider IPTV or content delivered via the internet to be adequately resilient currently. There is also a risk that as households move increasingly towards digital technology, which is dependent on an electricity supply as well as internet provision, citizens are less likely to have access to more traditional forms of technology, such as battery powered radios which have been suggested by the Deputy Prime Minister recently as a means to access emergency communications¹⁸. Comments warning of the risks of our dependence on the internet from the astronomer royal, Lord Rees of Ludlow, are notable: "We're very dependent on electricity, obviously, and increasingly on the internet. And if either of those things failed, we'd be in bad shape very quickly. Within a few days it might lead to a real social crisis¹⁹."

98. VLV notes that concerns have been raised about the plan to abandon the existing emergency calling system using traditional telephone handsets in favour of Voice over IP (VoIP) following lengthy power cuts during late 2021 which left customers without access to emergency calls because they had no electricity or broadband, which VoIP depends on. Following these concerns we note that BT paused its roll-out of Digital Voice²⁰ while it worked on a more resilient programme. We understand its migration has now restarted.

99. Providing the public with government messages in times of national or local emergencies is difficult with an on demand service. Sending emails may not reach everyone; neither will texts be seen unless sent to an "always on" device with clearly identified notification alarms. Ironically, it may be social networks that could offer a means of alerting the population to impending risks of all kinds but these do depend on a robust working system. Not everyone has a mobile device to rely on. Broadcast radio or TV is a more reliable means of doing this but it also has its weaknesses.

¹⁷ *Future of TV Distribution*, Ofcom, 17 October 2023, page 11

¹⁸ <https://www.thetimes.co.uk/article/stock-up-on-batteries-in-case-of-grid-meltdown-britons-told-hpdwhlfql>

¹⁹ *How a blackout could put Britain four meals away from anarchy*, *The Times*, 10 December 2023

²⁰ <https://commonslibrary.parliament.uk/research-briefings/cbp-9471/>

100. We also note comments relating to WRC23 and its discussion of UHF spectrum for DTT and PMSE. VLV responded earlier this year to Ofcom's pre-WRC23 consultation. In our response we encouraged Ofcom to take a robust position to secure the UK's DTT services and to have the option to continue them beyond 2034 if required. PMSE is a vital part of a range of applications from village halls to theatres and major film and TV location shoots. It is vital in supporting the UK's content production system. If DTT is to be replaced by IPTV after 2034 and the spectrum given to MNOs, that spectrum will need to retain the PMSE slots or at least move them conveniently elsewhere. That would burden many organisations, large and small, with cost. In addition all White Space services, currently sharing the DTT spectrum, may be lost if the MNOs usage precludes them or if they cannot be replicated elsewhere.

101. Ofcom have raised the prospect of intervention in enabling a transition from DTT to IPTV. Traditionally intervention is a measure introduced after market failure, not an *a priori* one with intent to effect change. At this point in time, a decade before any actual change is likely, given that licences are in place until 2034, it is unclear how viewers and service providers will behave in the next few years. Raising the prospect of abandoning DTT is in itself likely to cause lack of confidence in DTT when the evidence today²¹ suggests that DTT will still be in demand in 10 years' time. A more positive and encouraging approach is to expect that DTT will continue beyond 2034 UNLESS it is proven beyond doubt that IPTV can fully replicate it. The fact that the PSBs are developing their existing IPTV facilities, such as Freely, should not be taken as an acceptance by them that DTT is no longer of interest.

102. DTT clearly works and has done for over 20 years. The onus is on IP network operators to grow the quality and reach of their systems to meet criteria set by DTT. An important question, therefore, is to establish what IPTV will **actually** be able to deliver, technically and economically, as a substitute for DTT. A major stumbling block will be subscription charges unless IPTV operators are required to deliver PSB content free of charge AND to prioritise its delivery security and resilience. That is clearly a matter for regulator and government policy. To sustain the values of PSB such a policy seems essential.

103. Some of these points suggest that government intervention will be needed to shape the conditions under which a transition is made, not only at technical level. We agree that a major consideration for government intervention is the likelihood that a certain proportion of viewers and citizens who are vulnerable in a number of ways might well be disadvantaged by a transition to IPTV.

104. Over the next 10 years IPTV, provided by primarily commercial enterprises, must attempt to grow its reach and improve its offering; in particular the operators will endeavour to overcome the various obstacles that presently prevent that. However there are limits to commercial growth in reach set by financial considerations among others. In announcing its objective to have gigabit broadband by 2030, Government has already intervened by effectively encouraging broadband operators. That objective cannot be achieved by Government itself but through agencies, either of its own making or through assistance to existing players. It is as if government wants IPTV to displace DTT. Does government imagine a "Public Broadband Corporation" to provide public services via IP?

²¹ *Future of TV Distribution*, Ofcom, 17 October 2023, Footnote 12, page 7

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)?

105. If the IP network in general is the 'shared infrastructure' referred to in this question, then passing displaced DTT traffic through will it require sufficient additional capacity and functionality. Scaling IP networks is not a simple matter because the instantaneous load is statistical and undefined sometimes leading to congestion requiring control mechanisms which can cause data delay until capacity becomes free or, at worst, data shedding.

106. If however if the 'infrastructure' referred to is the network of masts and towers from which DTT is transmitted (including the hundreds of relays), as well as the network feeds from multiplex centres, then if DTT is abandoned this infrastructure may become obsolete. However, from the beginning of the privatisation of the Independent Broadcasting Authority (IBA) in 1990 dedicated masts were also used for other services and managed by a facilities leasing department of the successor body, now Arqiva, which has also inherited BBC distribution facilities.

107. For over 30 years this has been a valuable resource for other telecommunications networks including mobile network operators, emergency services etc. Some masts, typically those that used to carry VHF transmissions (ceased in January 1985), do not carry broadcast signals at all and are used only for these other services; there is precedent for a life after broadcasting for some of the DTT infrastructure.

Response to Section 6: Coordination to ensure good outcomes

108. The potential disruption that even a planned transition (rather than allowing the market to decide) from DTT to IPTV could cause will affect all players in the current distribution chains. "Good Outcomes" for viewers means a smooth and affordable transition, without loss of any of the positive features of DTT. Its familiarity leads to viewers taking DTT "for granted", because it is always there when required and only needs an antenna and receiver for access. Broadband users appear to expect that their service will be disrupted from time to time.

109. A co-ordinated national approach to transition seems essential. This should be planned carefully well in advance with regular and open communication with citizens at its heart. We have commented above (see **paragraph 34**) on the essential role played by an organised project to manage switchover set up well in advance. We would expect to see something similar for an IPTV transition but ONLY when that transition has been demonstrated as beneficial and practical. DTT must remain until IPTV is demonstrably working for viewers and citizens.

110. In such a case what would be the criteria for phasing DTT out? Clearly one is that DTT retains spectrum access whilst it still operates. Over the next series of WRC meetings (2023, 2027 and 2031) the prospects of MNO pressure to cede that spectrum are real and may well require intervention influencing DTTs existence beyond 2034.

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?

111. Whilst market place competition is good for consumers, duplication is questionable. Sending Everything Everywhere could be wasteful of economic and infrastructural resources. An efficient distribution system optimises the match between the content and the channel. The range of content of interest to viewers is wide and so expecting one method to be optimised for all types may not be practical or economic.

112. In view of the diversity of the current TV distribution system and production of TV content, VLV believes there is a significant risk that a lack of industry consensus could lead to a negative outcome for citizens. It is important that Ofcom and the government identify where there is consensus and where there is not. They need to identify where there could be potential tensions in future between the players involved because of their diverging incentives. If one looks to the experience of Digital Switchover, which was a complex 10 year project, it is easy to see how much more complex the current transition is likely to be. Digital Switchover was more controllable because there were fewer players involved. Many of those involved in this transition are global corporations which have an interest in the UK market but have global priorities. It is crucial that a strategy is devised which has clear outcomes as its goals, at the heart of which citizen interests are protected.

113. Taking into account these concerns, VLV believes that it will be crucial for the Government to lead a managed and co-ordinated transition to IPTV, if it is decided that IPTV technology is appropriate as our primary platform for TV distribution. Whatever coordination and planning is adopted it must be subject to public scrutiny and must have the public good as its primary objective.