



The BBC's distribution arrangements for its UK public services

A study examining whether the BBC's distribution arrangements represent value for money

By Mediatique on behalf of the BBC Trust

November 2013

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Important information

This report is one of a series of reviews undertaken by the BBC Trust on Value for Money of the BBC's activities. It was prepared by Mediatique Limited for and only for the BBC Trust, in line with our engagement letter dated 31 January 2013 and for no other purpose. Our sole duty of care is to the BBC Trust.

This report represents Mediatique's view of the relevant BBC operations, and of companies, platforms and markets at the current time. Any opinions, forecasts or estimates herein constitute a judgement as at the date of this document. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or estimates; no representation or warranty, express or implied, is made regarding future performance.

The text of the present report was being finalised as the BBC announced (8 October 2013) a number of new initiatives following a review instigated by the incoming Director General. These included the potential launch of a BBC One +1 channel, the extension of the iPlayer catch-up window from 7 to 30 days, the creation of a BBC Store for the purchase of TV programmes and various upgrades to the iPlayer to enhance personalisation. The implications of these initiatives on the BBC's distribution expenditure have not formed part of the present study.

The sources used by Mediatique in the compilation of this report are believed to be accurate but Mediatique takes no responsibility for the accuracy of information derived from third-party sources. Our work has been based primarily on internal management information, which we have not independently verified or corroborated, and on interviews with key BBC staff and, where relevant, staff at other companies and organisations. Mediatique has not undertaken legal, contractual or technical due diligence of any kind (for instance of the technical operations of BBC distribution or of specific contract terms between the BBC and third parties).

The information contained in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, and it may not contain all material information concerning the relevant markets in the UK.

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Some information contained in the report is of a commercially sensitive nature, and redactions have been made where necessary (as indicated by [X]).

While we have consented to allow this report to be made public, we have not in so consenting extended our duty of care beyond that to the BBC Trust.

The views, analyses and conclusions expressed herein are those of Mediatique and no other party, and should not be construed as representing, in whole or in part, the opinions of the BBC Trust.

Mediatique Limited

November 2013

1. Overview of key findings and recommendations

- 1.1 Mediatique was asked by the BBC Trust to review the BBC's distribution of its content and services to UK licence-fee payers, from the perspective of the Corporation's obligations under the Charter and Framework Agreement and the requirement to secure value for money.
- 1.2 The objectives of the review were:
- to determine whether the BBC's key objectives and principles in relation to universality and provision of services to licence-fee payers are met on a cost-effective basis, both in terms of efficient delivery on public-service obligations and compared to relevant market/commercial benchmarks;
 - to evaluate the governance structures in place covering the BBC's distribution activities;
 - to determine whether and the degree to which the BBC's consideration of distribution options permits it to respond to future evolution in the markets in which the BBC operates.
- 1.3 The principles governing the BBC's approach to distribution are contained in relevant sections of the BBC Agreement, particularly the undertaking that licence-fee payers' interests are met in relation to the expenditure of licence-fee income to efficiently distribute the BBC's UK services ("or elements of their content") to "viewers, listeners and other users (as the case may be)...in a range of convenient and cost effective ways which are available or might become available in the future."¹ As laid out in the framework strategy document *Delivering Quality First*, the BBC Trust requires the BBC to ensure that every household has "convenient access to each relevant BBC service, free at the point of use."²

Distribution expenditure measured against universality obligations and commercial benchmarks

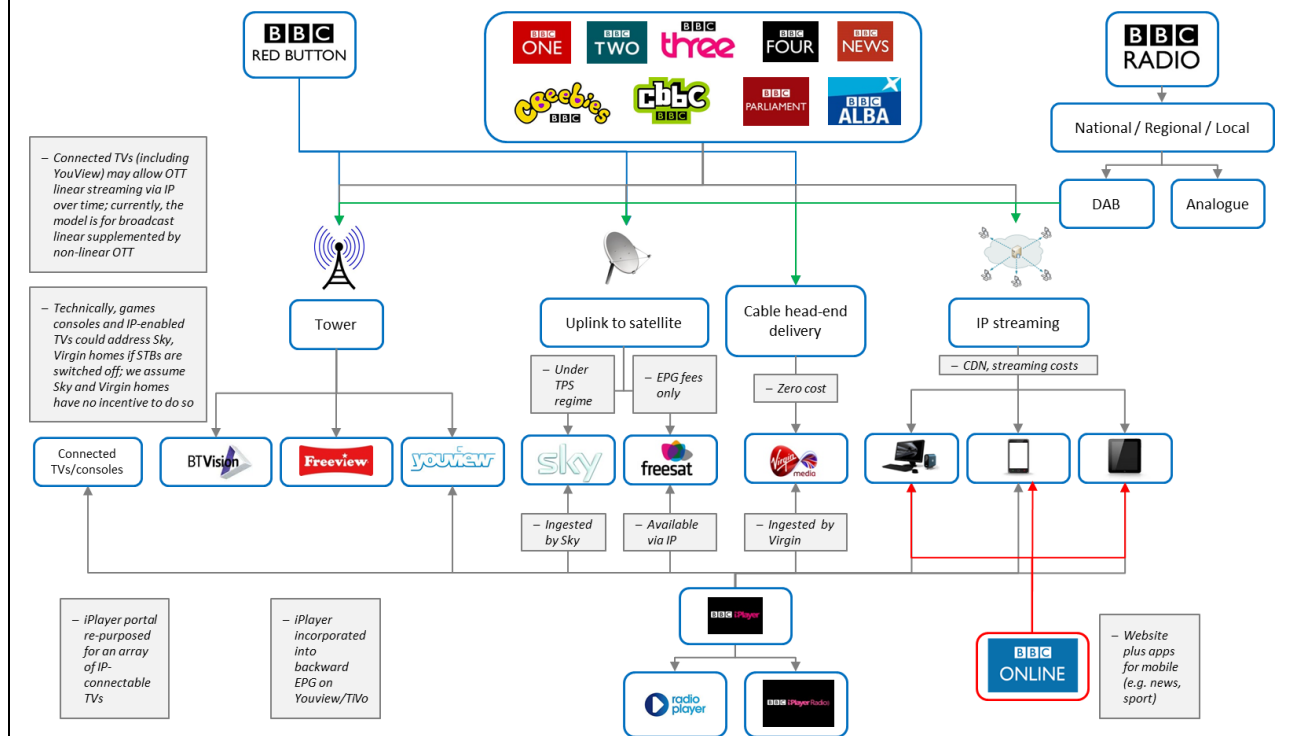
Key findings: the BBC's distribution expenditure in the aggregate represents good value for money, when considered against the Corporation's formal obligations to be universally available and free at the point of use, and the need to address licence-fee payer expectations and preferences

- 1.4 The BBC operates across the media landscape in the UK, in television, radio and online, reflecting the array of means by which licence-fee payers may choose to consume content. It distributes its services via "traditional" means (terrestrial, satellite and cable) and via "online" streaming and on demand (to PCs, connected TVs, games consoles, tablets and smartphones).
- 1.5 The BBC's TV channels are available on all key TV platforms in the UK – digital terrestrial TV ("DTT"), satellite and cable – and via Internet Protocol ("IP") delivery to multiple devices. Likewise, its radio services and its online services (including its destination website bbc.co.uk and its iPlayer, BBC Sports and BBC News portals/apps) are available on multiple devices. A snapshot of the current distribution profile of BBC services is provided below.

¹ Clause 12 (1), "An Agreement between Her Majesty's Secretary of State for Culture, Media and Sport and the British Broadcasting Corporation", 2006. (http://www.bbc.co.uk/bbctrust/assets/files/pdf/about/how_we_govern/agreement.pdf.)

² "The BBC's Strategy: Putting Quality First", 2010, page 11; and "Delivering Quality First, Final Conclusions", 2012, page 19, available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/dqf/final_conclusions.pdf.

The BBC's distribution footprint, main platforms



- 1.6 By definition, the BBC in fact duplicates its technical reach by being available on multiple platforms with overlapping footprints. The BBC aims to ensure that licence-free payers are able to receive, at no incremental cost, a full complement of BBC PSB services regardless of their choice of TV platform supplier or technology and without, for example, having to switch between different delivery methods. The BBC is also specifically obliged under the Agreement to distribute its “principal” digital TV services on DTT. As a result, the BBC can justify carrying the costs of securing distribution on multiple platforms in recognition of its obligation to be universally available. Moreover, the BBC’s broad distribution footprint allows elements of the BBC’s portfolio of services to be consumed variously by all categories of licence-free payer irrespective of age, gender, social class and device ownership.
- 1.7 The scale of the BBC’s distribution footprint creates a number of complexities – specifically around definitions. For example, commonly used terms for the difference between “broadcast” and other means of distribution include: scheduled versus non-scheduled, linear versus non-linear, live versus time-shifted and so on. For the purposes of style and clarity, we refer throughout this report to the linear distribution via broadcast and cable of TV channels and radio stations as “**traditional distribution**” and the distribution of the BBC’s services over IP including live streaming and non-linear products such as iPlayer and bbc.co.uk via any platform or network and to any device as “**online distribution**”. This is consistent with the BBC Trust’s own definitions and with the standard terms used in the BBC’s Annual Report and Accounts.
- 1.8 The BBC distributes its services using a mix of internal and external means, including in-house technical resources and contracts with third-party suppliers.

- 1.9 The BBC spent a total of £233m on distribution across all devices and platforms in the year ending March 2013 (FY2013), which represents 6.5% of the licence fee. This is well within the internal guidance of a ceiling of 10% for distribution and marketing expenditure as set out in the *Putting Quality First* (PQF) strategy document.
- 1.10 Of this, £203m³ was spent on traditional distribution (i.e. TV and radio, including a share of the costs of platform investments in Freeview and Freesat and industry stakeholder groups Digital UK and DMOL), and £30m on streaming and other on-demand distribution. The latter figure includes £24m directly related to distribution of content (e.g. iPlayer, BBC News) via connected devices and to PCs with the remainder representing the BBC's share of the costs of YouView, the IP-enabled TV platform jointly owned by the BBC, broadband and TV providers Talk Talk and BT, transmission company Arqiva and other public-service broadcasters (ITV, Channel 4 and Channel 5).
- 1.11 The BBC's current expenditure on traditional distribution is either in line with that of its direct commercial cohort or, where higher, is justifiably so when adjusted for a range of specific contractual terms and when viewed in the context of the BBC's obligations to be universally available as laid out in the Charter and the Framework Agreement.
- 1.12 The BBC's current total distribution bill is in line with BSkyB's "transmission" expenditure in 2012/13 as a percentage of its retail subscription revenues and broadly comparable with our estimate of the ratio of distribution expenditure to advertising revenues for ITV. Other broadcasters including Channel 4 and Channel 5 have even higher ratios, which reflect their lower viewing shares and revenues and the fixed-cost nature of much of the underlying distribution bill.
- 1.13 Of the direct expenditure for online distribution, the BBC costs are significantly lower on a unit-cost basis than for the commercial cohort, reflecting both sound cost management at the BBC and the benefits of volume adjustments in line with the market-leading popularity of the BBC's on-demand services.
- 1.14 Future distribution costs are difficult to forecast, owing in particular to uncertainties around technology and the evolution of consumer behaviour; however, greater transparency has been provided by the BBC's clear syndication strategy (detailing the basis under which BBC content is made available on demand via third-party platforms and via the internet) and through greater standardisation of online delivery of content, leading to lower costs of re-purposing content for multiple platforms and various devices.
- 1.15 Further cost savings may be possible through the renegotiation of key contracts: generally, the BBC has adopted what Mediatique concludes is best practice with regard to long-term contracts, particularly by using strict procurement processes and encouraging competitive bidding where possible.
- 1.16 The BBC is also likely to benefit from spectrum efficiency gains as the DTT platform is developed further and from lower charges (perhaps no charges at all) on pay-TV platforms for access and platform contributions.
- 1.17 Offsetting this in the medium term will be the higher costs of further roll-out of the Digital Audio Broadcasting (DAB) platform and an increased commitment to HD channels.

³ Excluding £3.7m of analogue TV transmission costs incurred in the final year of analogue distribution preceding digital switch over.

Recommendations

- We advise the BBC Trust to request that distribution expenditure as disclosed in the Annual Report and Accounts be revised from FY 2014 onward to accord with the approach used by us in this report. For online distribution, we recommend that the disclosure be extended to cover some costs that BBC currently does not include and to cover the BBC's share of costs at YouView. Mediatique concludes that these adjustments would more fairly reflect the actual costs of distributing the BBC's domestic services.
- Given that the BBC has set as internal guidance a ceiling of 10% of the licence fee to be allocated to marketing and distribution, Mediatique recommends that the Trust request the BBC to calculate total distribution expenditure as a proportion of the licence fee and publish this figure in its accounts. This would aid in ensuring that outcomes are tracked consistently and transparently, both internally and externally.
- The commercial benchmarking performed in this report is one means of validating whether the BBC is achieving its "value for money" obligations. We therefore recommend that the BBC periodically review its expenditure (traditional and online) against commercial benchmarks using external, independent experts. This would provide regular and independent confirmation that the BBC's distribution expenditure is in line with commercial trends.

Decision-making in relation to key principles and objectives: Governance and internal reporting lines

Key findings: decisions on distribution are routinely informed by reference to the BBC's principles and objectives; however, there is asymmetry between online and traditional distribution that could be corrected by means properly for the BBC to consider

- 1.18 We reviewed internal governance structures, reporting lines and accountability related to distribution expenditure; we also took into account conclusions of a recently completed internal review on technology issues, which addressed some important elements of the BBC's distribution operations.
- 1.19 The two chief categories of distribution – traditional and online – are separately operated at the point of delivery and engagement with third party suppliers and distributors. Traditional distribution is delivered at operating level within BBC Distribution, which sits within BBC Technology, Distribution and Archive (TDA). The operation of online distribution falls under the Future Media Group.
- 1.20 Online distribution is represented on the BBC Management Board via the appointee from Future Media; there is no Management Board member directly responsible for TDA other than the Managing Director, Finance and Operations.
- 1.21 The dynamics surrounding traditional broadcast and online distribution via the internet and on managed TV platforms such as Sky and Virgin are substantially different, and these elements of the BBC's operations are understandably kept separate at the operating level; however, while there is pan-BBC consideration of distribution choices via the BBC's strategy function, there is no empowered body or board lower than the BBC Finance Committee or Management Board where these decisions are considered holistically.
- 1.22 The BBC's shareholdings in free-to-view TV platforms (YouView, Freeview and Freesat) are represented in different parts of the BBC and are not routinely considered (other than via the Strategy function) on a holistic basis.

- 1.23 We conclude that the BBC's internal processes are largely fit for purpose, skills are of the level required at the relevant levels of the Corporation, and expenditure decisions explicitly reflect the set of conditions imposed on the BBC in its Charter and Agreement regarding, for example, universality, audience impact and cost effectiveness.
- 1.24 In formulating its distribution strategy, the BBC takes into account market developments, the competitive landscape, technological innovation and evolving consumer behaviour, ensuring that it is aware of and responds to distribution challenges as they arise; while there is significant uncertainty about distribution trends and costs in the future, the BBC's governance structure, accountability and lines of reporting ensure it tracks these changes responsively.
- 1.25 The *Delivering Quality First* (DQF) strategy review process confirmed a framework for online distribution decisions that is transparent, fair and openly articulated to external parties. In particular, the BBC's syndication policy is a clear and consistent framework under which the BBC's content is made available on different platforms and devices.

Recommendations

- The BBC might wish to consider whether Technology, Distribution and Archive should be treated in a different way in terms of board representation and lines of reporting. There is currently asymmetry in this regard between Future Media (online) and TDA (traditional). Changes to representation and lines of reporting, which are for the BBC to consider, would permit the BBC to treat all distribution issues on an equivalent basis.
- Similarly, we recommend that a BBC board below the Management Board should be empowered to consider traditional and online distribution in the round.
- The BBC should carefully review its investments in TV platforms, namely Freeview, Freesat and YouView, in light of BBC-wide platform and distribution strategy and in particular its duty to promote the availability of services free (or at no incremental cost) at the point of delivery.

Fit for future purpose

Key findings: the BBC is aware of key challenges, including the rising costs of distribution, shifts in consumer behaviour/expectation and innovations in technology; greater internal sharing of technology analysis and consumer data would encourage informed consideration of challenges at a pan-BBC level; there is a growing tension between cost effectiveness and universality for which the BBC may not be fully equipped absent a benign public policy environment favouring public-service media

- 1.26 Future distribution challenges are likely to be significant. Key issues include the rising share of consumption accounted for by online delivery, the rate at which traditional TV broadcast is replaced over time by internet-delivered services and the degree to which traditional channels are challenged by new forms of content aggregation, search and navigation where traditional protections around listings and prominence are less salient.
- 1.27 The BBC has correctly identified as a key future challenge the potentially rising costs of distributing its services to multiple platforms and devices at a time of significant technological change and shifts in consumer preferences. It is also aware that it does not have the same tools as its commercial competitors to address issues of access and carriage in particular – and is therefore more dependent on regulation and public policy. The tools available to commercial PSBs but not to the BBC include the

potential of withholding content to secure better terms of access and prominence and the sharing of revenues between platform operators and channel or service providers.

1.28 The BBC has established clear policies around its response to these future challenges, including:

- a policy of protecting prominence for its range of services (i.e. ensuring that all BBC content is prominently displayed)
- support for “net neutrality” (the concept that no content is subject to differential treatment when delivered over the internet)
- a campaign to reduce platform charges it pays to pay-TV operators
- the championing of free-to-air TV platforms, including DTT
- a strategy of ensuring transparent online distribution costs, for example through supporting efforts to create common standards in online content delivery.

1.29 In the medium term, the BBC’s commitments to universality and cost effectiveness may collide, particularly around ensuring parity of services on all platforms (given capacity restraints on Freeview and the potential cost of accessing other TV platforms) and having to meet the dual costs of both traditional and online distribution.

Recommendations

- The BBC should use its technology partnerships and other commercial engagement to ensure that key industry developments are shared and the implications understood across the BBC. The aim should be to have a common (if constantly reviewed/updated) view on key trends in technology and innovation in order to contain costs and remain relevant to licence-fee payers.
- Data on consumer behaviour and preferences developed by the BBC and/or sourced externally should be widely disseminated throughout the BBC; such data needs to be upgraded to reflect individual activity rates (subject to privacy considerations) and the BBC should continue to support industry-wide enhancements in metrics via official ratings agencies such as BARB and RAJAR – for example, extending these to routinely cover catch-up and on-demand consumption on multiple devices as well as broadcast.

Summary of key recommendations

Observation	Recommendation	Rationale
Certain costs (including encoding and the BBC's share of joint venture YouView) are not currently included in the distribution category in the BBC's annual financial report	Transcoding, encoding and metadata layering costs, as well as the BBC's share of YouView costs, should be included in online distribution from FY2014 onward	The costs included by Mediatique better reflect the actual costs incurred by the BBC in delivering its content to licence-fee payers
The BBC has established guidance that no more than 10p of each licence-fee pound should be spent on marketing and distribution	The BBC should routinely report the total distribution expenditure as a proportion of the licence fee in its annual financial accounts	Since this internal guidance confers discipline and clarity, annual reporting would provide internal and external focus
A market benchmarking analysis on distribution costs provides explicit validation of the BBC's achievement of "value for money"	The BBC should seek periodic benchmarking analysis from external experts on various aspects of its distribution expenditure	Since the BBC itself may not always be fully aware of commercial pricing trends, a periodic external review of certain key expenditure would provide clarity, discipline and validation
There is asymmetry between the lines of reporting for traditional distribution and for online distribution. There is no forum for consideration of all distribution expenditure on a holistic basis	The BBC should consider changes to board representation and lines of reporting for traditional distribution functions and a Board below the level of Management Board should be empowered to consider distribution issues in the round	Given the importance of traditional distribution and the need to consider how both traditional and online distribution will develop in the future, symmetry in terms of reporting lines and the empowerment of a BBC board to consider all aspects of distribution would provide better focus
There is no common view at the BBC about the pace and direction of change in terms of technology, and key data about consumer behaviour is not necessarily shared efficiently on a pan-BBC basis	The BBC should use its technology partnerships and other commercial engagements to ensure widespread sharing of industry developments and trends; data on consumer behaviour developed by the BBC or received from external parties should be routinely shared across all parts of the BBC, particularly to improve the prospects for developing more personalised BBC services for licence-fee payers	The speed of change market-wide places a premium on data and analysis, and if this is widely shared across the BBC a more efficient engagement with technology and consumer behaviour would ensue

2 Introduction

In this section, we set out the purposes of this report and provide an overview of both the BBC's current distribution footprint and the ways in which it tracks consumption of its services

- 2.1 The BBC Trust commissioned Mediatique to conduct a review of the BBC's distribution activities in the UK, comprising its TV and radio broadcast services and its online activities including distribution of the iPlayer and bbc.co.uk services to multiple devices.
- 2.2 The objectives of the review were:
- to determine whether the BBC's key objectives and principles in relation to universality and the provision of services to licence-free payers are met on a cost-effective basis, both in terms of efficient delivery on public-service obligations and compared to relevant market/commercial benchmarks;
 - to evaluate the governance structures in place covering the BBC's distribution activities;
 - to determine whether and the degree to which the BBC's consideration of distribution options permits it to respond to future evolution in the markets in which the BBC operates.
- 2.3 We were also asked to provide recommendations regarding areas where the BBC might consider making changes to its governance framework, operational structure and internal processes. For the avoidance of doubt, we were not asked to comment on the BBC's distribution strategy *per se*, but rather how it is delivered against the key public purposes and requirements for cost effectiveness and value for money.
- 2.4 In completing our review, we considered the full range of the BBC's UK traditional distribution activities, including the broadcast of its TV channels, the BBC Red Button service and its radio stations. In addition, we reviewed the distribution of iPlayer, Radio Player, the BBC Sports and News apps and its website services via bbc.co.uk. The BBC's investments in joint ventures Freeview, Freesat and YouView are included in our analysis. The operations of BBC Worldwide, including its businesses in the UK, are excluded.
- 2.5 The investigation undertaken to complete this report pre-dated the announcement of several new initiatives by the Director General of the BBC in October 2013, including the proposed launch of a BBC One+1 channel and changes to the iPlayer. These initiatives, which have not yet been reviewed by the BBC Trust, may have an impact on the BBC's distribution expenditure in the future.
- 2.6 The scale of the BBC's distribution footprint creates a number of complexities – specifically around definitions. For example, commonly used terms for the difference between “broadcast” and other means of distribution include: scheduled versus non-scheduled, linear versus non-linear, live versus time-shifted and so on. For the purposes of style and clarity, we refer throughout this report to the linear distribution via broadcast and cable of TV channels and radio stations as “**traditional distribution**” and the distribution of the BBC's services over IP including live streaming and non-linear products such as iPlayer and bbc.co.uk via any platform or network and to any device as “**online distribution**”. This is consistent with the BBC Trust's own definitions and with the standard terms used in the BBC's Annual Report and Accounts.⁴

⁴ A note on the methodology we have used, as well as a list of key interviewees and sources consulted, can be found in Section 6.

- 2.7 The review was considered against the foundational undertakings of the BBC in relation to the distribution of its services, as contained in relevant sections of the BBC Agreement, the BBC Charter and the Communications Act (2003), and as further articulated in its strategy framework (formalised in *Delivering Quality First*).
- 2.8 The principles governing the BBC's approach to distribution are contained in relevant sections of the Agreement, particularly the undertaking that licence-fee payers' interests are met in relation to the expenditure of licence-fee income to efficiently distribute the BBC's UK services ("or elements of their content") to "viewers, listeners and other users (as the case may be)...in a range of convenient and cost-effective ways which are available or might become available in the future."⁵ As laid out in the framework strategy document *Delivering Quality First*, the BBC Trust requires the BBC to ensure that every household has "convenient access to each relevant BBC service, free at the point of use."⁶

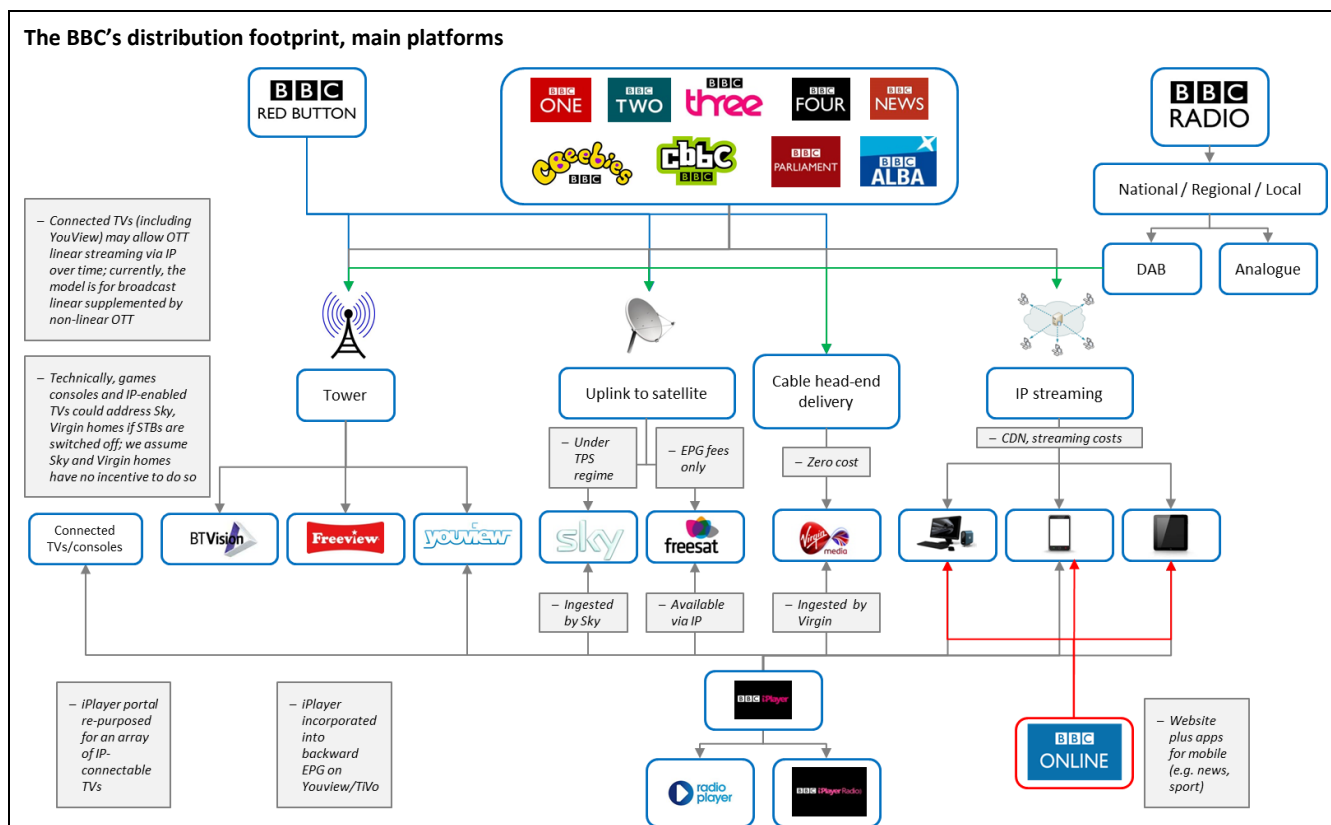
The BBC's current distribution footprint

- 2.9 The BBC operates across the media landscape in the UK, in television, radio and online, reflecting the array of means by which licence-fee payers may choose to consume content. The BBC distributes its services using a mix of internal and external means, including in-house technical resources and contracts with third-party suppliers.
- 2.10 The BBC's TV channels are available on all key TV platforms in the UK – digital terrestrial TV ("DTT"), satellite and cable – and via Internet Protocol ("IP") delivery to multiple devices. Likewise, its radio services and its online services (including its destination website bbc.co.uk and its iPlayer, BBC Sports and BBC News portals/apps) are available on multiple devices. A snapshot of the current delivery methods can be found in Figure 1.

⁵ Clause 12 (1), "An Agreement between Her Majesty's Secretary of State for Culture, Media and Sport and the British Broadcasting Corporation", 2006 (http://www.bbc.co.uk/bbctrust/assets/files/pdf/about/how_we_govern/agreement.pdf).

⁶ "The BBC's Strategy: Putting Quality First, 2010, page 11; and *Delivering Quality First, Final Conclusions*", 2012, page 19, available at: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/dqf/final_conclusions.pdf.

Figure 1: The BBC's distribution footprint, main platforms (Source: Mediatique)



Note: The YouView platform includes all TalkTalk TV subscribers and those BT TV subscribers who have opted to install a YouView box instead of a BT Vision box

2.11 The distribution of these services takes place within a crowded and competitive marketplace featuring a range of other suppliers, including other public-service broadcasters (PSBs), pay-TV operators, publishers and online and mobile app providers. The BBC's direct and indirect competitive cohort is wider and deeper than was the case even a decade ago.

- The BBC's TV services, for example, compete directly for viewers with ITV, Channel 4, Channel 5, as well as with an array of free-to-air and pay-TV services from BSkyB, major international channel brands and, more recently, new entrants such as Netflix and Amazon-LoveFilm.
- The BBC's radio services compete at both national and Nations/local level with commercial radio stations and with online audio services delivered from around the world over the internet.
- The BBC's catch-up TV, online sports and news services face an extensive array of competitors, including other domestic broadcasters and a number of global media players, including ITV Player, 4OD, Mail Online and Yahoo.
- More generally, legacy TV and radio programming also competes for consumer attention with a number of services available on a range of platforms, including gaming and social media (for example, Nintendo and Facebook).

Television

- 2.12 The eight TV channels in the BBC portfolio (excluding Scottish channel BBC Alba) are available in the same form on all TV platforms in terms of broadcast hours, regional opt-outs, and HD variants. In addition, a single video stream is normally available on the Red Button on all TV main platforms (although this increases for special events such as the Olympics, Wimbledon and the Glastonbury Festival).
- BBC One is available in 18 variants on satellite (with all regional variations broadcast), while the relevant BBC One regional or Nations variant is delivered to the cable head-end for onward distribution to cable homes and over the air via the DTT distribution network directly to consumer premises receiving equipment.
 - BBC Two is available in four variants (the Nations), while all the other channels are national services.
 - As of the date of this report, the BBC has two HD services – BBC One HD and BBC Two HD – with variations for the Nations (Northern Ireland, England, Scotland and Wales) available for BBC One HD. Sub-national variants in England are available in SD only. The BBC announced plans in July 2013 to launch five additional HD channel services – BBC Three, BBC Four, CBeebies, CBBC and the BBC News Channel – from early 2014. It is also reviewing options around increasing regional opt-out availability in HD, and launching a time-shifted channel, BBC One +1.
- 2.13 It is worth noting that regionalisation on satellite requires significant additional capacity and incurs incremental costs, as all regional variants are broadcast on a national footprint, requiring separate transponder capacity. Regional opt-outs can be delivered efficiently to specific regions via the DTT network and to cable homes in franchise areas, given that the physical infrastructure is in each case regionalised.
- 2.14 The BBC's channels are distributed via its own multiplexes on DTT, with SD channels carried on PSB 1 and its HD services carried on its second multiplex (Mux B or PSB3) – the latter having been upgraded to operate on more efficient broadcast standards which allow the carriage of bandwidth-hungry HD services.⁷ The BBC is the multiplex operator for these two multiplexes, although it contracts with national transmission provider Arqiva for network access and managed transmission services.⁸ Some play-out services are provided by broadcast services company Red Bee, formerly part of the BBC. In addition, multiplexing, circuits and other technical services are provided by Atos (formerly Siemens) as part of a broader technology out-sourcing contract which runs until 2015.
- 2.15 All of the BBC's SD and HD services are available on digital satellite, secured via satellite transponder capacity contracts with SES-Astra and giving the BBC distribution on the Sky platform and on Freesat. The feeds are delivered to cable operator Virgin, which in turn distributes all BBC channels to its cable TV subscribers at no cost to the BBC.
- 2.16 All BBC services are provided free of charge to distribution platforms, unlike some services from commercial PSBs and in contrast to the situation in some international markets, where public-service

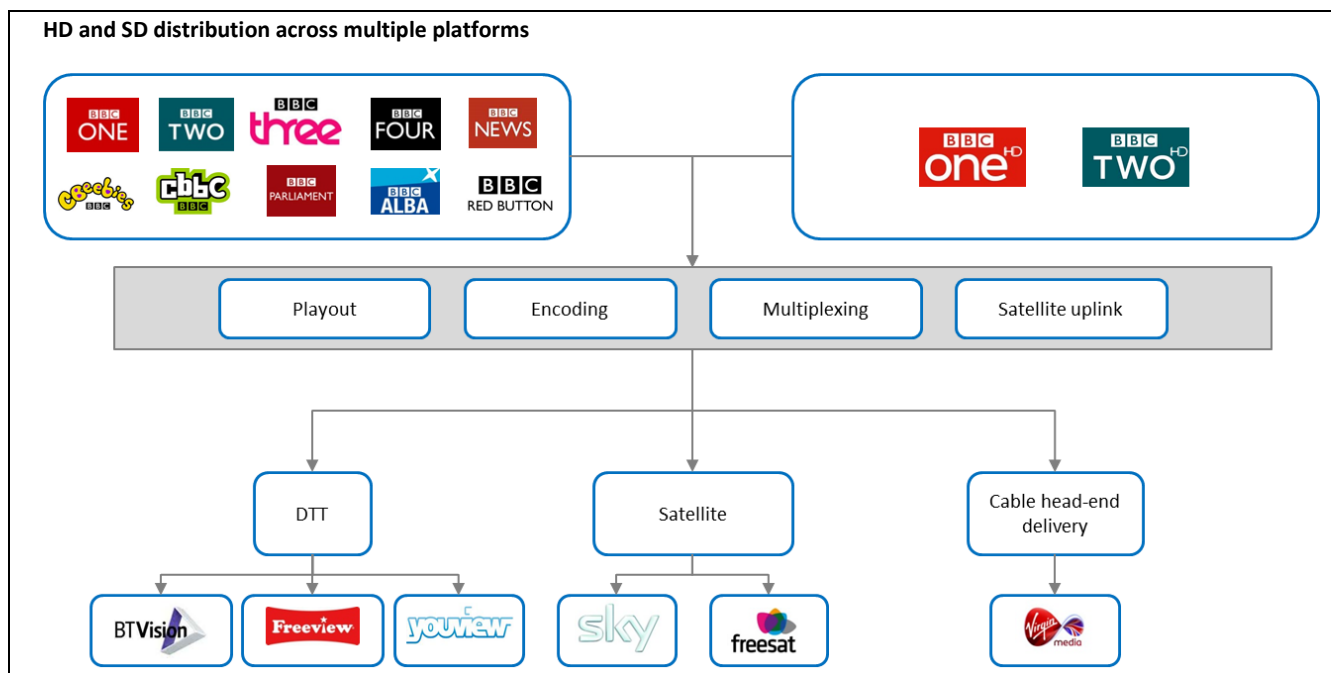
⁷ PSB3 operates on MPEG 4 and DVB-T2 transmission standards that require homes to have compatible receiving equipment. See Appendix D: Glossary of terms for further details.

⁸ There are four contracting parties for current national DTT multiplex operations in the UK – the BBC (PSB 1 and PSB3), Digital 3 & 4, a joint venture of ITV and Channel 4 (PSB 2), ITV-owned SDN (COM 4), and Arqiva (COM 5 and 6). Arqiva is the monopoly supplier of network access services to the UK transmission system, and also supplies managed transmission services. An outline of the channels carried on each multiplex is provided in Appendix C.

channels receive payments or subsidies (e.g. transponder capacity) from platform operators.⁹ In the case of the Sky platform, the BBC is obliged currently to pay listings and platform contribution charges.

2.17 A map of the BBC's HD and SD TV channel distribution on multiple platforms is presented in Figure 2.

Figure 2: HD and SD distribution across multiple platforms (Source: Mediatique)



Note: The YouView platform includes all TalkTalk TV subscribers and those BT TV subscribers who have opted to install a YouView box instead of a BT Vision box

- 2.18 On all relevant TV platforms, the BBC is assured an “appropriately” prominent position on electronic programme guides (“EPGs”), under current broadcasting regulation. While the rules are not prescriptive, in practice this has meant that BBC One and BBC Two are at the top of TV platform EPGs.
- 2.19 The BBC’s channels are also streamed live on the internet subject to geo-masking to limit reception to UK locations only. Viewers can elect to “view-from-the-start” of a programme in this service. Live streaming is also available on supported tablets and smartphones.
- 2.20 As part of its distribution strategy, the BBC directly supports TV platforms Freeview, Freesat and YouView, and also helps fund Digital UK (which has responsibility for the operation of the Freeview EPG among other undertakings). Freeview is jointly owned by the BBC, ITV, Channel 4, Arqiva and BSkyB, and markets the Freeview brand and specifies the kitemark for equipment manufactured under licence. Freesat is owned by the BBC and ITV, and similarly is responsible for enabling the horizontal market to manufacture receiving equipment. YouView is owned by the four main PSBs, Arqiva, Talk Talk and BT. Nearly all YouView equipment installed to date has been provided under subsidy by either BT or Talk Talk, in exchange for a subscription.

⁹ See Oliver & Ohlbaum, “PSB Network platform re-transmission and access charges in the UK: the case for change”, available at: <http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/RetransmissionandAccessChargesReview.pdf>; and Mediatique, “Carriage of TV channels in the UK: policy options and implications”, a report for the Department for Culture, Media and Sport, available at: <http://dcmscommsreview.readandcomment.com/wp-content/uploads/2012/07/120709-DCMS-Carriage-Consent-Report-FINAL.pdf>.

Radio

- 2.21 BBC Radio services include the national networks (Radios 1, 2, 3, 4 and 5 Live), all of which are available on digital and analogue (FM except for Radio 5 Live¹⁰); and digital-only stations, comprising 6 Music and the companion services for Radio 1 (1xtra), Radio 4 (4 extra) and Radio 5 Live (Sports Live). The Asian Network is available on Digital Audio Broadcasting (DAB) nationally, and eight medium wave (“MW”) frequencies in England. The BBC also broadcasts Nations radio stations – three in English in each of Scotland, Wales and Northern Ireland, and three in the indigenous languages in each of the non-English Nations. All of these stations are distributed via the BBC’s own analogue (FM and/or MW) network, supplied under its contract with Arqiva. Digital variants of the national radio services, along with digital-only national services, are transmitted on the BBC’s own national DAB multiplex. There are also 40 regional/local services in England, available via the BBC’s own radio network in analogue (FM and/or MW).
- 2.22 In DAB, the BBC leases capacity from commercial radio multiplex operators to distribute all the Nations services except Radio Foyle. For regional/local radio stations in England, those that are available in DAB are broadcast via commercial radio multiplexes (e.g. owned by Arqiva, UTV, Bauer Media and others). Under its funding agreement with Government, the BBC is extending its national DAB multiplex coverage to 97% – equivalent to the FM footprint – and is supporting efforts by commercial operators to increase local coverage to approximately 90%, which should allow many of the BBC’s English-region services currently unavailable on DAB to launch on that platform.
- 2.23 All of the BBC’s radio services are also streamed live on the internet, via the Radio tab on bbc.co.uk and via the iPlayer, the iPlayer Radio and the industry-wide Radio Player which acts as a front window to direct users to BBC or commercial radio services. The streamed services are also available on commercial radio players such as TuneIn. The BBC’s radio services are available for catch-up and/or as podcasts. A number of BBC radio services are also available on satellite, cable and DTT. A list of the BBC’s radio services and methods of delivery can be found in Figure 3.

Figure 3: BBC’s radio services and distribution footprint (Source: Mediatique)

BBC radio service	Number of stations	Analogue distribution	Digital distribution	Other distribution platforms
Network (national)	11	4 FM stations 3 MW stations BBC R4 on LW BBC World Service*	All carried on the BBC’s digital multiplex	DTT, Satellite, Cable, Online
Nations radio	6	6 FM stations 4 MW stations	5 stations carried on commercial digital multiplexes	DTT**, Satellite, Cable, Online***
Local and regional	40	All on FM Rural stations also on MW	30 digital stations carried on commercial multiplexes	All on satellite** 12 local stations on Cable. All available online

* BBC World Service delivered overnight on Radio 4 frequencies; ** Available in relevant nation/region only; *** Radio Foyle on DTT and online only (not carried on DAB)

¹⁰ A version of Radio 4 is also available on long wave – although this is likely to be withdrawn as LW technology reaches obsolescence; there are also nine locations where Radio 4 is available on medium wave (AM). Both LW and FM variants of Radio 4 are available on digital TV platforms except Freeview.

Online

2.24 The BBC's online services cover 10 product areas:

- | | |
|-------------------------|---------------------------------|
| ▪ iPlayer and TV | ▪ Knowledge and learning |
| ▪ Radio | ▪ CBeebies |
| ▪ News | ▪ CBBC |
| ▪ Sports | ▪ BBC home page |
| ▪ Weather | ▪ Search |

2.25 The BBC seeks, where possible, to distribute these services via IP delivery using content delivery networks ("CDNs") rather than rely on the use of proprietary closed networks or platforms; this so-called over-the-top ("OTT") delivery allows the BBC to maintain control over the editorial proposition, promotion and end-user experience. In circumstances where an OTT delivery method is not available, the BBC provides a bespoke product working in co-operation with the relevant distribution partner. For example, iPlayer is available to Virgin cable customers via Virgin's own media server (and over IP for Virgin TiVo internet-enabled set top boxes, or STBs), while content is ingested by Sky to be included on Sky's catch-up service, delivered via any Internet Service Provider ("ISP") provided the Sky STB is connected to the router.

2.26 A number of standards and other technical issues mean that BBC content is distributed via numerous different formats to a wide range of platforms. The BBC reports that it delivers content in 30 different formats, to more than 600 device types; however, recent signs of a convergence toward common standards for the delivery of online content over IP, including for metadata, suggest the amount of re-purposing may reduce in future.¹¹ In its online distribution objectives, the BBC has established a "four screen" strategy, across mobile, TV, tablets and PCs, seeking to make its services available across the spectrum of enabled devices subject to a syndication policy agreed with the BBC Trust. For the smart TV market, it is seeking to establish a common "connected red button service" available on all such devices (including smart TVs, games consoles and stand-alone STB services such as Now TV and Roku).

2.27 This connected red button service is aimed both at ensuring a common experience on connected TVs, set-top boxes and other devices across the market and at reducing the costs of re-purposing content and supply for multiple platforms and standards. The connected service is formalised through the Television Aggregation Layer (TAL), as described in greater detail in section 4. The BBC is also aiming to standardise the supply of its services to mobile devices, including tablets (although is required owing to multiple operating systems and standards to accept a degree of customisation).

2.28 The BBC manages its online distribution via its own media servers and through contracts with third parties, including Atos, Red Bee (for encoding/transcoding of content and metadata layering) and Level 3, Akamai and Limelight (for the distribution of content via CDNs).

¹¹ Some standards have developed as a result of closed operating systems (e.g. Apple's iOS) and there are still a number of broad coding and streaming protocols that are mutually incompatible. It appears, however, that there may be convergence around HTML 5 as a common "language" for online delivery of content and the BBC is certainly promoting standardisation in its own distribution strategy.

Viewing, listening, usage and appreciation

- 2.29 The BBC's broad distribution footprint allows elements of the BBC's portfolio of services to be consumed variously by all categories of licence-fee payer irrespective of age, gender, social class and device ownership.
- 2.30 There is a wide range of cost and benefit depending on the way in which viewing and usage outcomes are measured against distribution costs. For example, distribution of mainstream TV channels, which are widely viewed, represent clear relative value for money on a strict comparison of channel distribution costs against viewing generated. Minority interest services (e.g. children's, Nations variants) by definition look more expensive as they generate niche viewing/usage outcomes despite incurring significant costs. We underline that our work on value for money does not extend to judging service and editorial choices made by the BBC and the Trust in relation to defining the services that the BBC will produce but rather evaluating whether these services are distributed on a cost-effective basis.
- 2.31 The BBC regularly compiles viewing and engagement data across its services, in order to gauge licence-fee payer viewing and appreciation and to ensure that specific audiences within the UK population are able to access the services established for them. This is in addition to very broad tracking across the whole of the BBC, and the compilation of appreciation indices on a quarterly basis to track more subjective considerations about the BBC's distinctiveness and value.
- 2.32 The BBC tracks the outcomes of its distribution of multiple services through a combination of industry metrics, consumer surveys and its own internally generated data. For example, the BBC provides a quarterly update of key audience information, based on both external (third-party) and internal (survey) data. This information covers BBC TV, BBC Radio, "Digital Media Services," which covers all digital delivery, and the separate reporting of iPlayer consumption. The BBC's tracking of *reach, quality and value* ("RQV") is perhaps the most useful cluster of metrics.
- 2.33 The reach of the BBC is tracked via survey data and official ratings agencies (e.g. BARB for TV, RAJAR for radio, Comscore and other internal and external measurements for online), and is a major metric in determining whether the BBC's services are relevant to viewers, listeners and users. This is supplemented by extensive research and survey work in which the BBC interrogates in more granular fashion the expectations of distinct categories of licence-fee payer. The BBC collects detailed data on consumption of online content, including platform-by-platform statistics generated through its IP delivery and interpreted by its internal audience and research function.
- 2.34 The BBC's technical reach for its TV services is nearly universal as DTT-distribution of standard-definition services cover 98.5% of UK TV homes, while satellite is technically receivable by nearly all homes; by definition, its online services are available to any user connected to the internet (subject to minimum speeds and varying with standards – e.g. HD versus SD) or those with access to internet-enabled mobile devices (either via wireless broadband or WiFi).
- 2.35 By definition, the BBC in fact duplicates its technical reach by being available on multiple platforms with overlapping footprints. In practice, the BBC distributes on all digital TV platforms, to ensure that licence-fee payers are able to receive, at no incremental cost, a full complement of BBC PSB services regardless of their choice of TV platform supplier or technology and without, for example, having to switch between different delivery methods. The BBC is also specifically obliged under the Agreement

to distribute its “principal” digital TV services on DTT.¹² As a result, the BBC can justify carrying the costs of securing distribution on multiple platforms in recognition of its obligation to be universally available.¹³

- 2.36 In the quarter ending March 2013¹⁴, the BBC’s services had an actual weekly reach of 47.6m adults, or 96.8% of the adult population (aged 16+) – this is measured as the percentage of the available adult population interacting with BBC services each week. BBC One had a weekly average reach of 78%, with BBC Two at 51%.
- 2.37 The average time spent with BBC services each week in the year to end March 2013 was more than 19 hours across BBC TV, radio, red button, iPlayer and other online (all devices). The reach and average hours are derived from the Cross-Media Insight Survey, provided by GfK.
- 2.38 Separately, in line with industry standards, the BBC measures time spent on each medium for audiences reached, using official ratings from BARB for TV and RAJAR for radio. Each of these is compiled on slightly different bases, depending on the source. For TV, the BBC reached just over 86% of individuals aged 4 years and older each week in FY2013, registering an average of 11 hours viewed a week. For radio, based on individuals aged 15 and older, the BBC’s weekly reach was 67% in the year ending March 2013, generating average listening of 16 hours a week. For online, based on individuals 16 years and older, the reach in the first three months of 2013 (as measured through the GfK CMI survey and iStats) was c.50%, with time spent per user with BBC online services totalling 1 ¾ hours per week.
- 2.39 Quality and value measurements are more subjective. They are tracked and published on a regular basis, informed by the BBC’s own survey data and external research. The BBC measures the views of licence-fee payers 16 years of age and older via its standard Appreciation Index; in addition the Audience Reputation Tracker is conducted for the BBC by Kantar Media,¹⁵ and the BBC secures survey data via Pulse, a Panel of 20,000 UK adults, surveyed on behalf of the BBC by GfK. These value measurements are also subjected to value-for-money assessments, informed by ratios including expenditure versus reach.
 - The Appreciation Index (AI) for the BBC’s TV services in the first quarter of 2013 were in a tight range between a low of 83 out of 100 for BBC One, and a high of 85 for BBC Four, and an average of 83 (CBeebies, CBBC, BBC News Channel and BBC Parliament are not included in the survey). These ratios have been relatively stable in recent quarters.
 - For radio, the range was wider, with an AI between a low of 72 out of 100 for the Asian Network and a high of nearly 84 for 6 Music. The average for all BBC radio services was 80.
 - The “digital services” AI is reported on three bases – for online (78), mobile (83) and red button (76).

¹² “No later than the Digital Switchover date, the BBC must secure the objective that substantially the same proportion of households in the UK as can, at the date of this Agreement, receive the analogue television services in analogue form by means of terrestrial broadcasting (that is to say, through a television aerial), can receive all the BBC’s principal television services in digital form by that means.” Clause 35 of the BBC Agreement (2006).

¹³ The BBC is required to “provide” its PSB channels to TV networks, including satellite, under the Communications Act and the Agreement, “subject to the need to agree terms.” It does so via “in the clear” satellite distribution that is receivable without incremental payment by any household with a compatible dish. In practice, the BBC pays access and other charges to BSkyB to ensure its channels are easily available to Sky Digital subscribers, although the issue of payments between PSBs and Sky are the subject of considerable debate. See Sections 64 and 273 of the Communications Act (2003) for definitions of must offer/must carry: <http://www.legislation.gov.uk/ukpga/2003/21/contents>.

¹⁴ All reach and AI data here are sourced from BBC Audience Information Data Tables (document 1), January-March 2013.

¹⁵ Sample of 1,000 adults per month (16+), reported as mean score out of 10 where 1 is “extremely unfavourable” and 10 is “extremely favourable.”

- Across the BBC, the mean score from the Kantar Quality measure in Q1 2013 was 7.1 out of 10, unchanged from Q1 2012 and compared to 7.0 in the first quarter of 2011.

- 2.40 The combined viewing share of the BBC's TV channels is market leading in the UK. BBC One is the nation's most watched TV channel, with a 20% viewing share among all individuals¹⁶, relatively stable since 2009. By contrast, ITV's main channel secured a viewing share of among all individuals of 16% in 2012, compared to nearly 18% in 2009. Taking the TV portfolios as a whole, the BBC family of channels had a viewing share among all individuals (4+) of 33.6% in 2012, higher than in 2009 (32.7%), whereas ITV across all portfolio channels lost share, dropping from 23.1% in 2009 to 22.3% in 2012.
- 2.41 Channel 4 and Channel 5, over the same period, have also seen their all-channel share decrease, with Channel 4's portfolio down by 1.7% across individuals four years and older, and Channel 5's portfolio of channels down by 1.6% on the same basis. Multi-channel viewing share (not counting the PSBs' own multi-channels) was roughly flat, up just 0.4%. Taken as a whole, multi-channel viewing, including PSB multi-channel extensions (e.g. ITV2, More4), rose 10% to 46% of viewing by all individuals between 2009 and 2012.

Figure 4: Viewing share of key channel groups in the UK, 4+ (Source: Mediatique, BARB, BBC)

Channel portfolio	2009	2010	2011	2012	Change (%)
BBC channels	32.7	33.2	33.2	33.6	2.7%
ITV channels	23.1	22.8	23.0	22.3	-3.5%
Channel 4 channels	11.6	11.5	11.6	11.4	-1.7%
Channel 5 channels	6.1	5.9	5.9	6.0	-1.6%
Multichannel - Other	26.5	26.6	26.2	26.6	0.4%

BBC includes (for relevant time period): BBC One, BBC Two, BBC Three, BBC Four, CBBC, CBeebies, BBC News Channel, BBC Parliament, BBC Olympics, Red Button; HD included when available

ITV includes (for relevant time period): ITV, STV, UTV, ITV2, ITV3, ITV4, CITV, ITN News, ITV Play, ITV Sport, ITV Sport Select, Men & Motors; +1s and HD included when available

Channel 4 includes (for relevant time period): Channel 4, S4C, S4C Clirlun, E4, Film Four Extreme, Film Four Weekly, Film Four World, Film4, More4, 4Music, C4 Para 1, C4 Para 2, C4 Para 3 (the Paralympics channels); +1s and HD included when available

Channel 5 includes (for relevant time period): Channel 5, 5 USA, 5*; +1s and HD included when available

- 2.42 In radio, the BBC's services have higher listening, across analogue and digital, than commercial stations in the aggregate, taking 54% of total listening as measured by RAJAR in 2012. The BBC's share has been relatively static since 2006. Adult reach (15+) was 67% across the whole of radio in Q1 2013.
- 2.43 Overall listening to radio across the entire UK population, via the BBC and commercial services, has declined marginally in the past 10 years. However, the average number of hours a week of radio listening among 15-24 year olds has decreased markedly over the same period, down 25% from 22 hours in 2001 to just 16 hours in 2012, reflecting the growth in popularity of other audio services, including jukebox services and music downloads and other claims on leisure time, including social media.¹⁷
- 2.44 As a consequence in particular of the popularity of Radio 2, radio contributes proportionately more to the BBC's reach among older demographics, while it is less of a factor in securing reach among younger

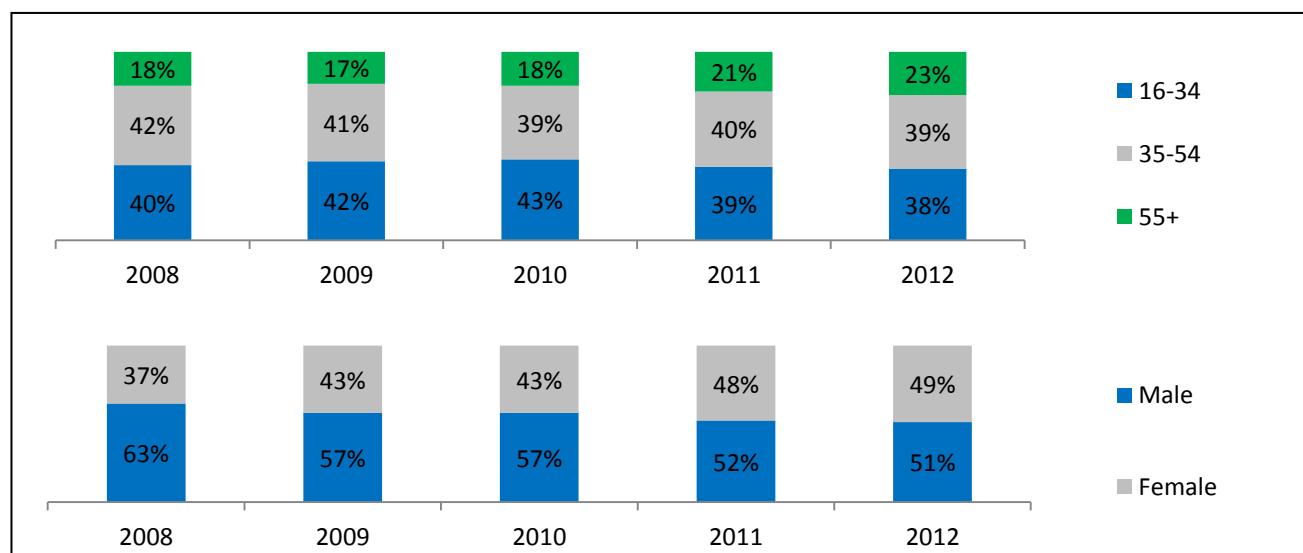
¹⁶ Individuals are defined as people aged 4 years and older.

¹⁷ Ofcom, "Radio and Audio", the Communications Market 2013.

audiences. Radio 2 led all other BBC services in terms of weekly average reach (more than 29%), compared to just under 20% for Radio 1 and just over 20% for Radio 4.

- 2.45 Performance in the online segment is tracked by the BBC's audience research team in considerable detail, including by platform (across games consoles, connected TV, tablets, mobile and PCs).
- 2.46 In the first quarter of 2013, the BBC reported reach among adults (16+) of 50% across online including mobile, up from 43% five years ago, although the rise also reflects the growth in IP enablement in the period. In online news for the whole of 2012, the BBC had a 42% share in terms of minutes of usage, online and apps, ahead of all other UK-based news providers.¹⁸ We estimate that the BBC had a c.40% share of the on-demand market for long-form (legal) TV content in 2012.
- 2.47 The BBC's strategy of extending the distribution of iPlayer to an increasing number of platforms has led to increased reach. Moreover, with the expansion in distribution, and in line with broadband connectivity trends and the increasingly mass-market take-up and use of smartphones and tablets, the BBC also reports a trend in usage statistics for the iPlayer toward a broader reflection of market-wide demographics.
- 2.48 As the data in Figure 5 shows, usage of the iPlayer by age group has shifted in recent years, with 23% of all requests for iPlayer content now coming from the 55+ age group, compared to just 18% in 2008; this age group makes up 28% of the UK-wide population. The share of 16-34s as a proportion of the total iPlayer user base has slipped slightly as the iPlayer usage profile has developed – to 38% from 40% (still higher than the share of this demographic as a proportion of the UK population).¹⁹ The 35-54 age group has similarly seen its share of the iPlayer user base decline, from 42% in 2008 to 39% in 2012 (this bracket makes up 28% of the UK population). The split of men to women also more closely reflects the wider population than in the past, with men now responsible for 51% of all requests, down from 63% in 2008.

Figure 5: iPlayer requests, by key demographic, 2008-12 (Source: Mediatique, BBC)



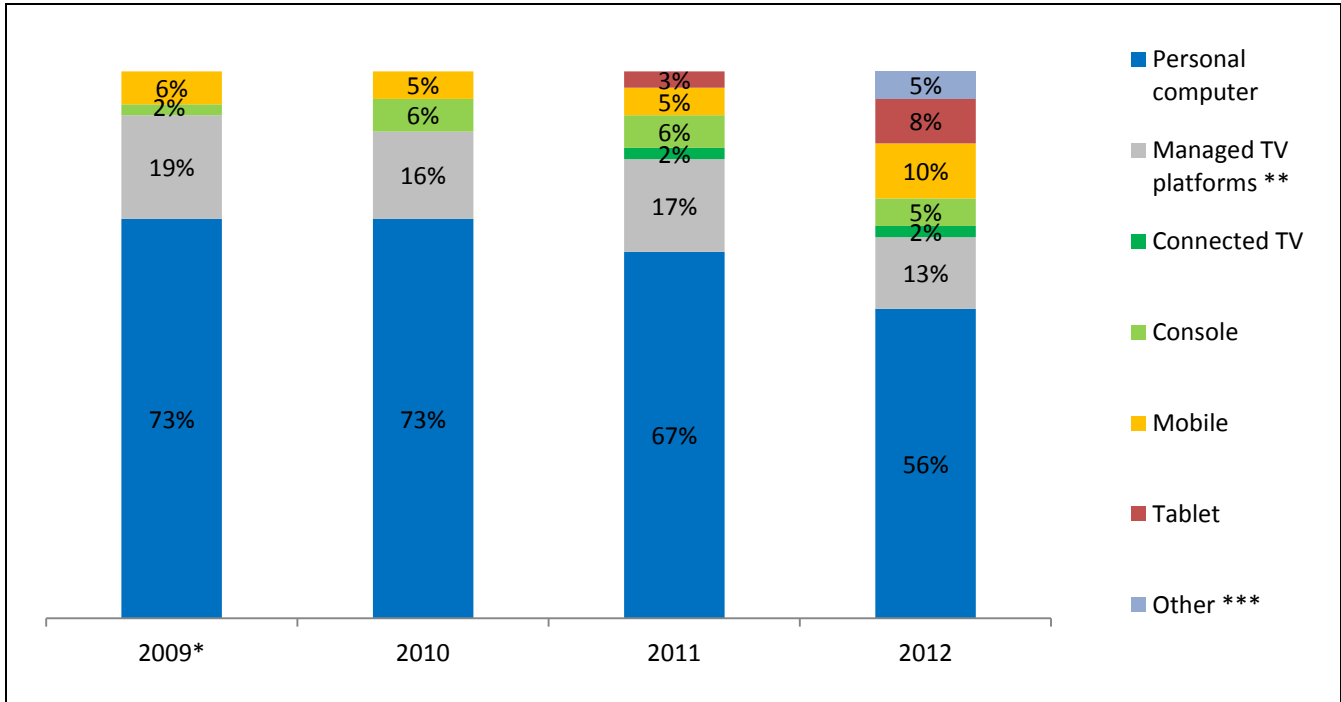
¹⁸ For a general analysis of the role of the BBC in providing online news, see: Mediatique, "The provision of news in the UK, A Report for Ofcom" (Annex 6 to Ofcom's advice to the Secretary of State for Culture, Olympics, Media and Sport), June 2012.

¹⁹ The Office of National Statistics publishes population figures for the 15-34 age group, rather than the 16-34 bracket that is commonly used for TV and other media viewing. The 15-34 demographic is 26% of the total UK population, compared to the 38% of iPlayer users that are aged 16-34. See <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population>.

- 2.49 The BBC is able to track streaming data on a weekly basis, including both user numbers and the total number of requests for streams. This data is invaluable in terms not only of demonstrating the reach of BBC content via emerging platforms but the underlying trends indicating patterns of consumer behaviour.
- For example, in 2007, the initial version of the iPlayer delivered virtually 100% of its content via personal computers. In the most recent data set (April, 2013), this was only 48%, with requests via tablets, mobiles and connected TVs growing much faster.
 - Critically for the BBC's management of distribution, the share of all online delivery that goes to devices other than the PC requires at least some engagement with platform and device partners, either through the standard Products approach with connected devices and mobile platforms or through more bespoke negotiation, as in the arrangements reached with BSkyB for Sky On Demand.
- 2.50 While the BBC is able to track the delivery of discrete pieces of content to multiple devices (as can be seen in Figure 6), it does not always have access to comprehensive data from managed platform partners (e.g. Sky and Virgin) and must rely on consumer research to estimate the number of viewers watching a given iPlayer stream during any given viewing session. Based on survey data, the BBC has made sensible assumptions in this regard, for instance accounting for a higher number of viewers per stream via TV sets and consoles than on PCs or phones. Based on these adjustments, the BBC reported total hours viewed of iPlayer content in 2012 of 600m hours, which represents 2.3% of the BBC's total hours viewed across linear and non-linear. Note that we use this figure of hours viewed to calculate our market benchmarks in the relevant section below. Ratings agency BARB has announced it will begin to monitor on-demand catch-up viewing later this year, and this is likely to improve the BBC's ability to track iPlayer usage.
- 2.51 Drilling down further into the online consumption data – for example, by demographic or social class – is not currently straightforward, as the BBC does not hold household or consumer data on the IP addresses to which it delivers content and is reliant on distribution partners for data in the event that the content is delivered via managed platforms such as Sky and Virgin. (This compares, for example, with Sky's treatment of its own subscriber base, where it uses Experian data matched to its subscribing households to layer consumer tagging to viewing and VOD consumption data, including via Sky On Demand.) As a proxy, the BBC tracks VOD consumption by programme, and applies the BARB data on demographics and social class derived from linear viewing to the online viewing. It also applies adjustments to account for multiple viewers per viewing sessions, based on survey data. This allows the BBC to approximate the likely engagement with its iPlayer content. The BBC is supporting BARB's plans to increase the sophistication of its viewing metrics, for example to include time-shifting beyond 7 days and to measure VOD via network TV players.²⁰ The BBC announced in October 2013 that it planned to develop further functionality for the iPlayer (the so-called "my iPlayer"), introducing more personalisation that will require capturing additional consumer data.

²⁰ BARB announced in June 2013 that it would begin to track VOD via network TV players (such as iPlayer and 4OD) from mid 2013 and publish the first results before the end of the year.

Figure 6: Annual iPlayer requests (TV and radio), by platform (Source: BBC)



Data only available for the last 6 months of 2009; ** e.g. Virgin, Sky, * 'Other' category primarily due to difficulties tracking online radio services*

3 Universality and cost effectiveness

In this section, we consider how through its distribution footprint the BBC meets its obligations to provide its services free at the point of use and in line with licence-fee payer expectations.

Thereafter, we look at the costs incurred by the BBC in distributing its UK services, and compare these broadly against two key standards – a direct cohort where this exists and a broader market cost in any event.

We conclude that the BBC's universality objectives are met through its multiple platform distribution strategy and engagement with a range of new devices and platforms. Aggregate distribution expenditure is in line with market benchmarks or, where higher, is justifiably so when considered against coverage requirements and contract terms. Long-term contracts are subject to competitive tender on renewal, typically involving the incumbent and other potential suppliers. In online distribution, direct costs (e.g. streaming, CDNs, transcoding/encoding) are well below market benchmarks, reflecting sound cost management and the obvious volume-related benefits accruing to the BBC as the long-form A/V market leader.

The BBC's obligations on access and cost effectiveness

- 3.1 The BBC's prime distribution objective is to make its services available, conveniently, to all licence-fee payers on a cost-effective basis. By definition, then, the BBC seeks to secure cost-effective distribution on all relevant platforms across the media distribution landscape. In formulating its distribution footprint, the BBC considers the preferences of licence-fee payers and seeks to ensure best practice and value for money.
- 3.2 The principal contributors of reach remain the BBC's TV and radio services, which continue to deliver value to the vast majority of households. The costs associated with these services also underpin the BBC's regional and Nations commitments, particularly in relation to the delivery of Nations and regional versions of BBC One, Nations versions of BBC Two, and Nations and local radio services (in Northern Ireland, Scotland and Wales and throughout England).
- 3.3 Within its broadcast services, the BBC specifically addresses the interests of a range of sub-categories of licence-fee paying households, including older and younger demographics and viewers in the Nations and regions. Viewed from this perspective, mainstream channels are by definition "cheaper" to distribute on a per-hour viewed basis owing to their large audiences compared to niche channels (e.g. BBC Parliament) where significant distribution costs are spread over a much smaller number of viewers. In its latest annual report, the BBC provides a service-by-service breakdown permitting a calculation per hour of viewing/listening across TV channels and radio stations. On these figures²¹, BBC One cost 0.2p per user hour to distribute in FY2013. With its far fewer broadcast hours, CBBC was twice as expensive to distribute per user hour. BBC Alba cost 1.4p on this basis, more than seven times the costs of delivering BBC One. BBC Parliament was the most expensive for distribution, at 4.9p per user hour. Similarly, the cost of distributing Radio 2, the BBC station with the largest audience, was just 0.04p per user hour in FY 2013, compared to 0.64p for the Asian Network.
- 3.4 The BBC has both conditioned and been conditioned by changes in viewer/user behaviour – for example, by pioneering the catch-up TV service, iPlayer, and by moving to address Android mobile users as they grew in number. The BBC's VOD consumption profile has closely mirrored developments in the wider market, as users have shifted from PCs toward tablets, smartphones and connected TVs.

²¹ Note that we provide here the BBC's own service-by-service allocation to underscore relative costs by service; in the remainder of this section we look in detail at aggregate spending on distribution and evaluate this against objectives and value for money.

The share of total iPlayer requests that is represented by PCs was nearly 100% in 2007; by early 2013, this has dropped to just 48%, with the strong growth delivered by tablets and smartphones in particular.

- 3.5 The appeal of the BBC's online services across major demographics confirms that the service is already relatively mainstream, as the mix of male/female consumption and viewing trends across age groups attest.
- 3.6 Throughout the period during which it has expanded its distribution footprint, the BBC has championed services that are free at the point of consumption – either properly free via over-the-air broadcast services, or at the “entry level” for closed pay-TV systems such as cable TV. In its syndication policy, it has set additional requirements around editorial control, parental controls, and non-adjacency to adult material or advertising. In its platform investments, it has equally championed services that are free at the point of delivery, particularly via Freeview and Freesat.
- 3.7 Its support of YouView, the IP-enabled TV platform that operates as a hybrid with a DTT tuner, was predicated on the platform's availability at no ongoing subscription cost (i.e. consumers would be able to purchase a YouView device for a one-off payment). In practice, nearly all YouView “sales” have been of subsidised equipment offered by sponsoring ISPs in exchange for a subscription payment of some kind.²² This may have implications for the BBC's strategy of promoting “free” access to its services, and is likely to form an element of a platform review by the BBC which is currently under way.
- 3.8 The importance the BBC attaches to editorial control and brand protection is confirmed in its distribution strategy, either directly via its own channels or through the syndication policy and contractual terms between it and distribution partners in the event of distribution via managed TV platforms. (We review the syndication policy in depth in section 4.)
- 3.9 The BBC's assessments of cost effectiveness must therefore be considered alongside the BBCs key objectives of universality, addressing licence-fee payers on multiple platforms, and maintaining high scores for reach, quality and value. From the simple perspective of cost versus reach, the BBC would achieve cost effectiveness through limiting its distribution footprint to one platform only – for example, DSAT or DTT – and avoid expenditure on ancillary platforms. However, such an approach would be at odds with its obligations under the Agreement to put all its “principal” digital services on DTT. More broadly, such a distribution pattern would oblige licence-fee payers to make different platform choices, with all households taking satellite services or relying solely on terrestrial signals, for example, or foregoing a range of BBC services available on a non-linear basis – e.g. the iPlayer over IP. Thus the BBC would not be fulfilling its obligations of serving licence-fee payers on multiple platforms of their own choice.

The BBC's obligations on spectrum efficiency

- 3.10 In all its distribution decisions, the BBC is necessarily mindful of ensuring it is using bandwidth efficiently. The duty falls to the Trust to ensure value for money is achieved; specifically, the Agreement stipulates that: “It is the duty of the Trust to secure the efficient use of the radio spectrum that is available for use by the BBC or its contractors.” This is achieved via routine oversight by the Trust of the BBC Executive's activities in relation to distribution and through periodic reviews of spectrum efficiency – for example, as embodied in the current report.

²² At the very least, this includes an incremental payment for an upgraded broadband service to enable seamless use of YouView's on-demand services.

- The use of DTT and DSAT spectrum are clear examples where the BBC has subjected its own decision-making to ongoing scrutiny, both to reduce/contain costs and to ensure spectrum is deployed as efficiently as possible, subject to the requirements of meeting licence- fee- payer expectations and consistent with Charter and Agreement objectives. For DTT, the BBC has undertaken considerable work since the launch of Freeview to ensure spectrum efficiency, including the fundamental shift from lower to higher modulation – 16 QAM to 64 QAM – and the transition of PSB3 from the DVB-T1/MPEG-2 standard to the more efficient DVB-T2/MPEG-4 standard, thus permitting the launch of the BBC’s HD services (and those of other PSBs). Its recent announcement that it would launch five additional HD services, potentially one of them on PSB3, has addressed an outstanding concern from the point of view of spectrum efficiency – namely, that it was meeting the costs of a fifth slot on the PSB3 multiplex despite neither leasing it to third parties nor using it for its own services. It should be noted that the BBC did undertake to lease the capacity to third parties in the course of 2012 and 2013.²³
- As a result of the DSO programme, the launch of HD services and various changes to the way BBC TV distribution is managed (e.g. with all SD channels now on PSB1), the distribution costs for each BBC service has varied considerably over recent years. For example, BBC Two’s distribution bill was reported as £31m in FY2010, then £21m in FY2011 and £19m in FY2012. This reflects the fact that over this period BBC Two was bearing half the BBC’s total analogue distribution bill (which declined as the DSO programme progressed). Similarly, the BBC’s HD channel distribution costs rose throughout this period, reflecting both the launch of the BBC HD channel on Freeview at the end of 2009 and then the launch of BBC One HD toward the end of 2010. Despite these significant factors (DSO, the launch of HD), the BBC’s overall traditional distribution expenditure has been relatively stable, even if the apportionment to individual services has fluctuated more significantly.
- Specifically with spectrum efficiency gains in mind, the BBC has worked with other PSBs and Arqiva to assist Ofcom in determining the future use of the 600 MHz spectrum that was cleared as a result of the DSO process. Ofcom has identified the potential need for a move of TV services from the 700 MHz spectrum (to harmonise that set of frequencies for use by mobile operators Europe wide) to the 600 MHz range. In advance of that, Ofcom has licensed interim muxes at 600 MHz to Arqiva for the use of broadcasters, and the BBC has agreed to take up two slots here as part of its proposed expansion of its HD channel portfolio. One aim is to create a more attractive HD proposition on free-to-view platforms, thus encouraging consumers to take up new compatible receiving equipment. If they do so in enough numbers, this may enable a DTT-wide transition to the new T2/MPEG 4 standards, which represents a far more efficient use of spectrum.²⁴

3.11 The BBC has also routinely reviewed its spectrum utilisation for radio, aiming to ensure efficient deployment subject to requirements around universality. This work has helped underpin the BBC’s commitment to helping the radio industry move to DAB standards more quickly, thus permitting at

²³ Ofcom had proposed to apply Administrative Incentive Pricing (AIP), a form of spectrum tax, on all holders of “gifted” capacity to ensure efficient deployment and to combat potential warehousing of spectrum by operators. The BBC and other PSBs in particular objected to AIP on the basis that there were already incentives in place to ensure efficiency and that the requirements around universality and the existence of a commercial market for the trading of DTT spectrum meant that broadcasting should be exempted. In the end, Ofcom agreed that AIP would not be applied before 2020. We cover the future implications of AIP in further detail in Section 5, below.

²⁴ The use of 600 MHz for interim DTT channels was confirmed in mid 2013, with the award of two multiplexes to Arqiva.

some point a switch-off of the analogue spectrum and the end of dual illumination – unlocking similar benefits to those that have arisen as a result of DSO of TV broadcasts.

- 3.12 In general, the BBC's use of spectrum on these multiple platforms is subject to formal scrutiny, in particular to ensure that the capacity it has been gifted on DTT, national DAB and analogue spectrum (its two DTT multiplexes, its national DAB radio multiplex and its national and local analogue radio networks) is being used as efficiently as possible. When the BBC's use of spectrum was reviewed on behalf of the BBC Trust by external consultants in 2007, a number of observations were made about ways the BBC could increase its terrestrial spectrum efficiency, including a move to updated multiplexing arrangements, the transition to 64 QAM from 16 QAM and review of the role of medium wave in delivering radio services.²⁵ In most cases, the BBC had already put in place plans to address the actions as laid out in that report or has done so since. Today, the BBC's standard definition multiplex operates at 64 QAM, the centralised coding and multiplexing infrastructure has been upgraded and the whole of its second multiplex is now operating at the more efficient DVBT-2, MPEG 4 standard.
- 3.13 Similar ongoing scrutiny is applied to the BBC's extensive satellite capacity, secured via commercial arrangement with SES-Astra. As part of its preparations for the launch of new HD channels, the BBC has identified spectrum allocation efficiencies through a refresh of coding and multiplexing.

Approach to ensuring cost effectiveness

- 3.14 In broad terms, the BBC has actively sought to minimise distribution costs, in line with its obligations to reconcile the objectives of universal access to all its services alongside ensuring cost effectiveness. It has in place a number of operational procedures that ensure that it maintains value for money in its distribution expenditure. We review some of these procedures here, and expand more fully on the means by which the BBC delivers on distribution objectives in Section 4: Governance, accountability and internal reporting, below.
- The BBC uses a combination of internal and external resources to distribute its services, typically seeking services from third parties if it is cost effective to do so while still maintaining the BBC's objectives of editorial control and brand protection.
 - Relationships with external suppliers are in every case contracted, sometimes for long periods. Key traditional distribution contracts run for multiple years, and are subject to detailed performance clauses and account management by relevant stakeholders within the BBC. The long-term nature of many of these contracts reflects the investment and refreshment cycle of the relevant distribution technology and the requirement of network operators to amortise high capital costs over many years.
 - When these contracts are renewed, the BBC uses what Mediatique judges to be best practice around procurement, and for certain contracts with external suppliers the BBC will conduct formal contract tendering. A recent example is the renewal of the BBC's analogue network radio provisioning, which was subjected to a competitive bidding process (ultimately won by the incumbent, Arqiva). The BBC's omnibus contract with Atos expires in 2015, and the BBC is currently developing plans for the continued provision of the services under this agreement, which will involve competitive procurement.

²⁵ A report by Deloitte on behalf of the BBC Trust, published in 2007, entitled "*The BBC's Efficient and Effective Use of Spectrum.*" Available at: http://www.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/vfm/dt_spectrum.pdf

- In relation to online distribution partners, contracts tend to be of shorter duration and decisions regarding specific distribution agreements reflect the dynamic and nascent nature of this emerging market. Short-term contracts are consistent with the competitive nature of the supply of services, rapidly evolving technology and price deflation. By limiting contract duration, the BBC can benefit from greater flexibility to contain costs as the market develops and new entrants emerge. Where the BBC seeks external services for CDNs and streaming, the BBC is able to use its volume requirements to benefit from significant economies of scale.
- 3.15 To say that the BBC must achieve value for money is not the same as saying that the BBC's expenditure is subject only to the discipline of market-rate costs – as important as it is that the BBC seek the best return for its distribution investment. In order for the BBC to meet its core objectives of delivering services that licence-fee payers find convenient, the BBC is justified in seeking to address users via an array of platforms, including via online.
- 3.16 As a result, while the costs of online distribution are high relative to the delivery of online outcomes, the BBC legitimately secures distribution on emerging platforms in order to remain relevant to all categories of licence-fee payers.
- 3.17 There is a strong public-service case that early adopters of new distribution modes increasingly require of the BBC multiple points of content delivery, even if certain other categories of licence-fee payer continue to evince broadly traditional consumption patterns. Furthermore, on the expectation of a move at some future point to the delivery of all BBC content over IP only, the Corporation is obliged to continue to invest in online distribution so as to ride the take-up and technology curves.

The BBC's current distribution expenditure

- 3.18 In evaluating the costs of the BBC's distribution footprint, we have compared current expenditure to a number of market benchmarks. For the avoidance of doubt, this exercise is not aimed at reviewing the BBC's distribution strategy *per se*, but rather at measuring how the BBC's expenditure on distribution compares to relevant commercial benchmarks as adjusted for BBC-specific elements such as reach and contractual supply terms.
- 3.19 We have reviewed operating budgets and board materials, and interrogated key BBC staff to establish a snapshot of the BBC's relevant distribution costs in the current financial year ending March 2013. We have looked to a degree at historical figures where appropriate, and have considered the implications on future costs – particularly for online distribution – of changing technology and shifting consumer behaviour over the short to medium term. We have also reviewed in detail cost savings as enumerated in DQF.
- 3.20 We have excluded certain costs from our analysis. For example, there are some overhead costs that are met centrally that do not form part of divisional budgets. We have also excluded editorial costs of re-purposing web pages and/or fashioning bespoke iterations of the iPlayer or News and Sport apps, as these costs fall within content budgets elsewhere at the BBC.
- 3.21 While the BBC has provided us with significant data to inform our analysis, much of this information remains confidential and covered by non-disclosure clauses of commercial contracts. We have, however, used categories of expenditure to compare on a like-for-like basis the costs incurred by the BBC compared to direct and market-wide cohorts.

Key costs for traditional distribution (2012/13) and earlier periods

3.22 We estimate that the BBC spent £203m on traditional distribution in 2012/13, composed of a number of key elements, as set out in Figure 7.

Figure 7: breakdown of the BBC's traditional distribution costs, 2012/13 (Source: Mediatique estimates; total subject to rounding)

Cost category	Amount: £m 2012/13	Key elements
DTT multiplexes	[X]	Operating costs for the BBC's two DTT multiplexes made up of managed transmission services and network access charges ²⁶
Satellite distribution	[X]	Contracts with SES-Astra for delivery of linear channels
Platform charges	£9m	Rate card payments for regionalisation services and platform contribution charges on Sky, and EPG charges on Sky and Freesat
CCM and circuits	£32m	Payments as part of Atos framework agreement to provide centralised coding and multiplex (CCM) services and circuits across satellite and DTT
Analogue radio distribution	[X]	Distribution costs for the BBC's national and Nations/local services
Digital radio distribution	[X]	Distribution costs for the BBC's national and Nations/local services
Freeview, Freesat, DUK, DMOL ²⁷	£9m	Share of the operating costs of these joint-ventures
Total	£203m²⁸	

3.23 Our estimate is largely consistent with the reported figure of £190m²⁹ in the BBC's 2011/12 accounts. In prior years, the declared distribution bill has been within a relatively tight range of between £180m and £190m. As we discussed above, this broadly stable expenditure masks a number of factors, including the progress of the DSO programme, the launch of HD services, the migration of all SD services to a single DTT multiplex and various changes to satellite transponder utilisation to carry more services (e.g. BBC One and BBC Two variants). The increase between 2011/12 and 2012/13 largely reflects the final stages of the DSO programme as coverage was extended in the period to an additional 25% of households. We have excluded the rental income that the BBC receives from tenants on its HD multiplex. In the rest of this section, we look at aggregate costs rather than costs at the channel or service level.

3.24 It is worth noting that the two biggest traditional distribution contracts with third parties represent more than 75% of the total category cost. These are the contracts with Arqiva (£125m across TV and radio) and Atos (£32m).

3.25 The payments made in order to secure distribution via the Sky Digital and Freesat platforms warrant further commentary, given that, in many other jurisdictions, public-service broadcasters are either exempted from payment or are in fact paid or otherwise compensated to supply their services.

²⁶ This global figure is gross of payments from ITV and Channel 4 for their slots on the BBC's HD multiplex (PSB3). It includes low-power DTT transmission costs (ended in October 2012) and pass-through electricity costs. PSB3 costs are higher than for PSB1 owing to T2 transmission re-fit.

²⁷ DUK and DMOL were merged in early 2013.

²⁸ We have excluded £3.7m of analogue TV distribution expenditure in the period, as this reflects the residual cost of the analogue terrestrial platform that was switched off at the end of 2012; this cost line will not therefore appear in future. Certain other costs have also been excluded, including licensing charges and certain non-departmental overheads.

²⁹ The difference between Mediatique and the BBC's calculations can be accounted for by our inclusion of some small Nations and Regions costs that are not included in the BBC's reported service split, and due to rounding of figures.

- The BBC currently pays nothing to be distributed via the cable platform in the UK, and has secured a zero payment regime on the YouView platform. On Freesat, the BBC pays £1.7m in total for TV and radio listings on the Freesat EPG, ranging from £6,000 per slot per year for radio stations to £37,500 for variants of BBC One and BBC Two, to £75,000 for mainstream channels BBC One and BBC Two, and for BBC Three, BBC Four and CBeebies.
- On the Sky platform, the BBC is obliged to pay EPG listings and regionalisation charges and its share of the Platform Contribution Charge (“PCC”), which are reviewable by Ofcom as Sky is a regulated Technical Platform Services (TPS) provider (ensuring that third parties are able to gain access to the Sky technical platform on a fair, reasonable and non-discriminatory, FRND, basis).
- In early 2012, Sky announced that it was reducing elements of the charges and would for the first time offer a discount to broadcasters making available a catch-up service on the Sky satellite platform. The rate card reduction followed a period during which broadcasters, including the BBC, campaigned for a change in the charging regime, arguing that Sky benefited from the presence of PSB channels on its platform and that these benefits were not taken into account when the TPS charges were set.
- From 1 July 2012, Sky announced new rates for the PCC, the element under TPS where Sky is able to re-coup allowable costs associated with the development and promotion of the Sky Digital TV platform (broadly, the cost of entry-level set-top boxes and some relevant marketing). The service charges for EPG listings and regionalisation were unaffected. For the BBC, the result of the reductions in PCC was to lower that element of its Sky payments to £6.5m per year, from £10m in the prior period. A further discount related to the availability of the iPlayer on the Sky On Demand platform brought the PCC charge down to £4.7m. Further reductions are planned from 1 July 2014, of which Sky has already provided indicative levels. The platform charges provided in Figure 7 have been adjusted to accord with BBC’s financial year (ending March).
- The BBC has proposed that its charges be zero, including EPG and regionalisation costs, as it argues that Sky derives benefits far outweighing these charges from having the BBC’s services available on an integrated basis on the Sky EPG. Indeed, the BBC has suggested that it might even be paid by Sky in return for permitting its services to be included on the Sky Digital platform. In a policy paper published in July 2013, the Secretary of State indicated the Government would wish to see platform access charges reduced to zero – or a plan to arrive at zero to be agreed. If necessary, it intends to develop legislation to achieve this, following a period of consultation.³⁰ Note that even with no further reductions other than those already indicated by Sky, the BBC’s payments for PCC would reduce to £3m from mid 2014 (including the effects of the catch-up VOD discount), plus EPG and regionalisation charges of £1.4m.

3.26 We have excluded play-out costs from our analysis, as set out in Figure 8.

Figure 8: evaluation of the BBC’s play-out costs (Source: Mediatique)

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| <ul style="list-style-type: none"> ▪ Play-out costs are not included in the BBC’s reported figures on distribution, as they reside within the budgets of BBC Television, which is responsible for the contract with Red Bee Media under which a significant share of the BBC’s total play-out services is delivered. It is arguable whether these costs should be included in the aggregate |
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³⁰ DCMS, “Connectivity, content and consumers: Britain’s digital platform for growth”, <https://www.gov.uk/government/publications/connectivity-content-and-consumers-britains-digital-platform-for-growth>.

figures for distribution, and other broadcasters, for example Channel 4, do indeed report play-out as a distribution cost, although we note they do not break these out from aggregated distribution expenditure.

- We have elected to follow the BBC's approach and to exclude play-out costs in the aggregate BBC distribution budget.
- It is difficult to ensure like-for-like comparisons between the BBC's play-out costs and those of its direct cohort. For instance, the BBC contract with Red Bee covers some services that other broadcasters handle in house; similarly, other broadcasters contract for regionalisation services from external suppliers, while the equivalent of these are handled in house by the BBC (via infrastructure managed by the Nations – BBC Wales, BBC Scotland and BBC NI).
- In addition to regional opt-outs for news and other programming, ITV also incurs incremental costs for the insertion of regionalised advertising. The costs of such ad-related regionalisation are also incurred by Channel 4 and Channel 5, but not by the BBC which does not carry advertising.
- Following confidential conversations with cohort broadcasters, we understand that the BBC's play-out costs on a service-by-service basis may indeed be higher than those of its direct competitors. This primarily reflects the BBC's requirement for far greater flexibility in its contract with Red Bee, as it more routinely makes significant changes to its schedule at short notice, including for live events and broadcasting breaking news of national importance. We understand that this also reflects the terms of the original sale of BBC Broadcast under which the BBC was paid £166m and agreed a long-term contract with the new owners.
- The current play-out contract between Red Bee and the BBC will be put out to tender through a process that is already under way, and the BBC will seek competitive bids in time for a seamless transition from the end of the contract in March 2017. It is expected that the incumbent will be joined by a number of other potential suppliers in the tender process. This will mark the first time since the sale of BBC Broadcast in 2005 that the contract will be subject to competitive tendering, and we expect that any gap between the BBC's expenditure on play out and that of its direct cohort will be narrowed as a result.

Key costs for online distribution (2012/13) and earlier periods

- 3.27 We estimate that the BBC spent £30m in 2012/13 on online distribution. This includes the direct costs of content delivery networks, edge caching, encoding/transcoding and metadata layering, across delivery to the four screens. The total excludes £6m of "project" investment (related principally to infrastructure and other upgrades to maintain efficient delivery), but includes the BBC's share of shareholder contributions at YouView (c.£6m in 2012/13).³¹
- 3.28 The key external contracts are with global leaders Akamai, Limelight and Level 3, providing CDN services. These are renegotiated on a regular basis, and the BBC as a result has been able to secure deep discounts reflecting its high volumes.
- 3.29 To date, the BBC has been able to contain the costs of online distribution through aggressive contract renegotiation with third-party suppliers (in particular providers of CDN services) and significant investment in its own in-house capability to reduce future cost burdens. The BBC aims at any given time to ensure that no more than 50% of online content is delivered by a single CDN supplier.
- 3.30 [X].
- 3.31 We have included in the direct online costs the contract with Red Bee for encoding/transcoding and metadata layering, as these costs are likely to be entirely brought in house in due course and are in any event key to preparing content for online distribution. In addition, the FM distribution budget will include c.£6m of the BBC's share of shareholder contributions at YouView (thus taking the figure to the "all in" amount of £30m).

³¹ This figure is a Mediatique estimate. The BBC has not verified its share of YouView costs, owing to a duty of confidentiality to its fellow shareholders.

3.32 Our estimate of the direct costs of online distribution (excluding YouView) is therefore £24m. This compares to the figure provided in the 2011/12 accounts of £19m, which did not include encoding/transcoding/metadata costs (estimated in 2012/13 at £[X]). A breakdown of costs in the current year is set out in Figure 9.

Figure 9: breakdown of the BBC's online distribution costs, 2012/13 (Source: Mediatique estimates)

Cost category	Amount: £m, 2012/13	Key elements
Delivery costs (via CDNs)	£[X]	Payments made to providers of Content Delivery Networks, which optimise delivery of large volumes of A/V content
Delivery costs via the BBC's own media servers	£1.7m	The network costs, primarily driven by streaming, delivering media assets delivered directly by the BBC (not through CDNs) and the content from origin to CDN
Edge caching	£[X]	The delivery to locations within the internet infrastructure close to the points of end delivery to the user
Encoding and transcoding and metadata	£[X]	The rendering of BBC source content into digital format ready for delivery via online means; currently largely delivered via Red Bee
YouView	£6m	Share of the operating costs of the joint venture
Other distribution costs (including staff)	£13m	These costs are those borne internally for the maintenance of the BBC's own media servers, monitoring, data storage space, website support and management costs. Special project costs are excluded
Total	£30m	

3.33 In general, it has not been possible to make a like-for-like comparison of the BBC's historical expenditure (2009-2012) on online distribution and the current figures, owing to changes in operational structure, in particular the creation of the OTG and POD mid-way through this period. For this reason, there is no like-for-like break-down of online distribution expenditure in prior years associated with the functions that have now been integrated into these new departments. The BBC reported annual online distribution costs between 2009/10 and 2011/12 of £19-22m.

3.34 Determining the prior development costs for the iPlayer and one-off development costs for mobile, connected TV enablement and upgrades to bbc.co.uk are outside the scope of our analysis. Moreover, we have calculated that the costs of mobile app development are immaterial, while at time of writing there were no plans for cost-intensive upgrades to the iPlayer proposition in the short to medium term.

3.35 Indicative of the rising costs for online distribution that can be tracked historically, it is noteworthy that CDN expenditure rose 70% from £[X] in 2009/10, to £[X] in 2012/13 (excluding edge caching costs). Over this period, consumption of iPlayer content rose significantly but unit costs were reduced in line with trends in the commercial market.

3.36 We have restated the underlying encoding/transcoding, edge caching, streaming (internal) and CDN costs to express these as a cost per streamed hour viewed as this allows us to relate the expenditure to audience impact and to compare it on a like-for-like basis with the BBC's direct and market wide cohort. Using the BBC's historical costs, we calculate the unit price of delivering one hour of iPlayer viewing via CDNs in 2009/10 was [X]p. By 2012/13, the unit price had declined by 25% to [X]p; in the intervening period, iPlayer hours delivered rose by 112% while overall CDN costs rose by 65%.

- 3.37 In its DQF proposals as tabled in 2011, the BBC proposed a “re-investment fund” forecast to be worth c.£145m p.a. by the final year of the current licence-fee settlement that would be available if the broad cost savings indicated in the DQF plan are delivered. This is aimed at permitting the BBC to meet a number of future challenges, some of which relate to distribution.
- 3.38 For example, the re-investment budget would support an annual £40m “digital innovation fund” to support the BBC’s “vision for connected broadcasting and the digital archive” (making available the back catalogue online through commercial and public means), and to permit further development of the “four screens, one BBC” strategy, “allowing all audiences to consume content seamlessly.” The targeted reinvestment would also help fund the BBC’s plans to increase partnerships (commercial and public sector) and to share the BBC’s “technical platforms, data and code” with the wider industry. In its final approval of the DQF plan in 2012, the Trust concluded: “We [...] support the ambition that lies behind the plans, although we await any formal proposals that may involve significant changes to services before assessing them for further regulatory scrutiny.”
- 3.39 We have not attempted to identify the share of any such re-investment that might be dedicated to expenditure properly regarded as “distribution” in the future. Any distribution-related expenditure would in any event be considered against the BBC’s internal guidance of a ceiling of 10% of the licence to be spent on distribution and marketing. We note that the plans to introduce a personalised “my iPlayer”, announced in October 2013, may require the deployment of some of these previously identified sources of funding. The implications of any such plans on the BBC’s distribution expenditure fall outside the scope of the present report.

Cost benchmarks

- 3.40 The BBC’s current total distribution bill of £233m, at 6.5% of the licence fee, is in line with BSkyB’s “transmission” expenditure in 2012/13 as a percentage of its retail subscription revenues³² and broadly comparable to our estimate of the ratio of distribution expenditure to advertising revenues for ITV.³³ Other broadcasters including Channel 4 and Channel 5 have even higher ratios, which reflect their lower viewing shares and revenues and the fixed-cost nature of much of the underlying distribution bill.
- 3.41 It should be noted here that the BBC has a greater number of staff working on distribution-linked activities than is the case elsewhere in the broadcasting market. However, the BBC also engages in different activities that are traditionally out-sourced or not performed by other broadcasters. For example, the BBC maintains its own terrestrial TV and radio spectrum planning function to optimise distribution, while commercial broadcasters rely wholly on Arqiva and Ofcom. In line with undertakings in the Framework Agreement, BBC Distribution also provides the Radio and Television Investigation and Reception Advice service to the public on behalf of all UK TV and radio broadcasters. These two functions involve c.40% of departmental staff.
- 3.42 The staffing level reflects in part the historical skills set, when the BBC was more actively engaged in delivering distribution services on its own account. In addition, the staff costs are immaterial in the context of the total distribution bill. Other than to reflect on the skills set represented by internal BBC

³² Sky reports a transmission bill of £401m, from total retail subscription revenues of £5.9bn, or a ratio of 6.7%. Source: BSkyB annual results, 2013.

³³ ITV plc does not disclose distribution or transmission costs, and declined our invitation to provide broad figures. We have triangulated from available data to estimate the costs, but these have not been validated by ITV.

staff (routinely of a high calibre), we have not otherwise considered the staffing levels of distribution-linked operations.³⁴

- 3.43 We have looked in greater detail at the costs at a disaggregated level, where appropriate and where reliable commercial benchmarks are obtainable.
- 3.44 The BBC's expenditure on DTT distribution is broadly in line with the costs of other multiplex providers.
- The BBC's DTT costs (managed transmission services and access charges) are in the order of £[X] across its two multiplexes, excluding certain costs such as circuits and centralised coding and multiplexing (CCM) services supplied by third parties. ITV and Channel 4 jointly run their own multiplex – Digital 3&4 – of comparable scale to the BBC's SD multiplex.³⁵ We estimate they spend in the order of £[X] per year in managed transmission and network access fees (again excluding certain costs such as the provision of CCM and circuits).
 - The BBC's higher costs can be explained by contractual variations – largely around the level of service required from the third-party service provider and the higher level of coverage for disaster response/recovery required by the BBC – and by the higher costs of re-fitting PSB3 for T2 transmission. The current market price for a video stream on a commercial multiplex (where coverage is 92% of homes, as opposed to a PSB multiplex coverage of 98.5%) is between £5-6m per year. Assuming 12 streams are carried on a commercial multiplex, the market benchmark price for a full multiplex is £60-72m per year (and more to account for the coverage premium).³⁶
- 3.45 The BBC secures a range of multiplexing services for both DTT and satellite (and from there to cable networks) via a third-party contract with Atos. We estimate that the BBC's costs for the CCM and circuits category, at £32m, are broadly in line with those paid by other broadcasters when adjusted for size and complexity (e.g. substantial circuit costs to support extensive regional variants).
- 3.46 The BBC's radio network costs for its own national stations in DAB (and all its analogue services) are broadly in line with those of the commercial sector on a nominal basis, but considerably lower when adjusted for the number of transmitter sites operated (which delivers wider coverage for the BBC).
- The BBC pays £[X] a year for its national DAB distribution, compared to £[X] paid for the commercial national multiplex (Digital One).
 - The difference reflects the relative coverage of these services, with the BBC now delivering outdoor coverage to 93% of the UK population, compared to 85% for Digital One. These respective levels of coverage are delivered via 135 transmitter sites for Digital One and 230 for the BBC. The higher number of transmitters for a relatively small incremental level of coverage reflects the diminishing returns in terms of potential audience of building infrastructure to reach less dense and geographically more challenging areas of the country. Adjusted for these factors, the BBC's national multiplex is no more expensive than Digital One by percentage point of coverage and far cheaper on a per-site basis. For the BBC's local and regional digital radio

³⁴ For example, of the 27 staff in the BBC Distribution department, a number are directly involved in providing reception advice to audiences (a service that had previously been provided by Ofcom), in spectrum planning and in dealing operationally with major suppliers. The total staff costs here (assuming an average of £65k per full-time equivalent) is less than £2m p.a. (or just 1% of the traditional distribution cost).

³⁵ The SDN multiplex is a special case, for a number of reasons. It is owned by ITV plc, and a proportion of the capacity is reserved for use by Channel 5. The latter leased some of its capacity to a third party (Top-Up TV) and then contracted to take spectrum back, at a higher price (as prices for DTT slots had risen sharply in the interim). As a result, it is difficult to get a like-for-like basis for comparison. Moreover, the SDN multiplex is built out to 92% of homes, not 98.5% as with the PSB multiplexes. For these reasons, we have excluded SDN's costs from our direct cohort comparisons.

³⁶ Source: Mediatique, based on market estimates compiled across commercial multiplexes.

multiplexes in DAB, the BBC pays £[X] to the commercial multiplex operators, of which a proportion is profit to the operators.

- The analogue costs of £[X] are in line with the commercial sector when adjusted for complexity and coverage.³⁷

- 3.47 The BBC spends £[X] a year with SES-Astra, for the delivery of its portfolio of services on satellite. Given its strategy of being available in-the-clear on satellite, the BBC's regional variants are available to all homes on satellite, although the appropriate regional variant can be found at the relevant EPG slot across the country. The BBC's satellite costs, when adjusted for the number of services supported, are broadly in line with market prices, reflecting the commoditised nature of services in this relatively mature and competitive market. It is worth recalling that the national footprint of satellite necessitates the broadcast of all regional variants, requiring greater capacity relative to DTT, the infrastructure of which is optimised for regional delivery.
- 3.48 The BBC's traditional distribution budget includes payments to platform operators Freesat and Sky. These are based on rate cards and are the same for all players across the market. The BBC is campaigning for reductions in these payments, as we noted above.
- 3.49 For online distribution (a total of £30m), we have excluded for the purposes of the benchmarking exercise the c.£6m of YouView costs, leaving a total of £24m. Within this, we have further refined our definitions to identify expenditure that is traffic-related and for which commercial benchmarks are available – i.e. encoding/transcoding and metadata layering (£[X]), edge caching (£[X]), BBC internal streaming costs (£1.7m) and CDNs (£[X]). These costs total £11m.
- 3.50 The remaining expenditure of £13m relates to a number of internal (including staff) expenditure lines, among them data storage space, maintenance, monitoring, and management. These costs are impossible to benchmark owing to lack of transparency within commercial cohort operating structures and issues around the definition of comparable cost categories. In the current exercise, therefore, we have focussed on the BBC's traffic-related expenditure for which direct commercial benchmarks, including rate cards published by end-to-end suppliers, are available.
- 3.51 The BBC's direct online unit distribution costs (traffic-related) are significantly below commercial benchmarks, reflecting the volume-related discounts the BBC is able to secure.
- The direct traffic-related costs incurred by the BBC are a mixture of internal and external expenditure. Each segment along the value chain is subject to different cost and supply dynamics, and the core elements of CDNs and streaming are available from multiple suppliers in the UK market. Economies of scale play a significant role in determining pricing levels, and players generating high volumes are able to extract lower unit prices from third-party providers. We estimate that the BBC has roughly 40% of the (legal, non-film, non-adult) long-form video-on-demand market in the UK by number of hours viewed – more than all the other PSBs combined – allowing it to secure economies in its per-unit distribution bill.

³⁷ The external contracts for analogue radio were recently put out to tender. Arqiva, the regulated provider of access and MTS and the incumbent supplier, was awarded the contract.

- When restated as a cost per streamed hour viewed, the traffic-related costs of £11m translates into 1.7p per hour of content viewed in the year ending March 2013³⁸; excluding transcoding/encoding and metadata costs, the figure is [X]p. By comparison, we estimate that the market price for these services is in the range of 2.1-3.6p per hour³⁹, and we estimate that both ITV and Channel 4 fall within this range. The lower variable cost per hour achieved by the BBC reflects the industry's volume discount approach and the relative size of the BBC's share of the online market (principally for long-form A/V content).

3.52 We set out an overview of the BBC's key distribution costs alongside relevant commercial benchmarks in Figure 10. These figures do not include platform shareholder contributions (Freeview, YouView, Freesat) and we have excluded certain online distribution costs where benchmarking is impractical.

Figure 10: comparison of the BBC's distribution costs to commercial benchmarks (Source: Mediatique estimates)

Cost category	BBC cost: £m, 2012/13	Commercial benchmark cost: £m, 2012/13	Mediatique assessment
DTT core costs	£[X] for two multiplexes	£[X] per multiplex	The BBC is in line with market benchmarks when adjusted for service levels contracted
Satellite distribution	£[X] per stream	£[X] per stream	Commercial pricing in mature, competitive satellite market; the BBC has secured market-consistent terms
Platform charges	£9m	n/a	Charges are based on market-wide rate cards and the BBC's charges are consistent with this
CCM and circuits	£32m	Various	The BBC has unique requirements across radio and TV, making a direct comparison difficult; our interrogation of ITV/C4/C5 costs suggests the BBC is in line in this category when adjusted for complexity
National radio distribution	£[X] for national multiplex	£[X] for commercial national multiplex	The BBC's higher nominal spend reflects higher coverage of BBC services – c.93% coverage for the BBC compared to 85% for commercial radio and significantly more transmitter sites; on a per-site basis, the BBC costs are considerably lower
Nations/local radio distribution	£[X] for all regional/local DAB	n/a	The BBC pays a commercial rate for the carriage of Nations/local radio on third-party multiplexes
Online delivery costs (encoding/transcoding, CDN, streaming and edge caching)	1.7p per hour viewed	2.1-3.6p	The BBC uses a combination of internal resources and competitive rates from external suppliers to ensure that it benefits from economies of scale; the BBC's expenditure is significantly below market rate

³⁸ Using data from the OTG, we estimate that BBC iPlayer hours delivered in 2012/13 were 87% of total streams. On this basis, we have calculated that 635m hours of content were delivered for online viewing (as adjusted for multiple viewers). In practice, there is a wide variation in bit rates (much lower for delivery of content to smartphones, for example, and highest for connected TVs). The direct costs are transcode/encode, edge caching, CDNs and streaming via the BBC own network.

³⁹ Our commercial benchmarks are based on the rate cards of Amazon S3, Windows Azure, Akamai, Brightcove, Edgecast and others, applied to the same volume of online delivery as estimated for the BBC. These rate cards were reviewed via desk research (via sales websites and industry ranking and reviews), supplemented by telephone conversations with suppliers.

Future distribution costs, 2013-2017

- 3.53 For the remaining period of the current licence-fee settlement, the BBC is aiming to reduce elements of its distribution budget, as agreed in DQF.
- 3.54 For traditional distribution, with the exception of some savings from the renewal of key contracts (including its radio contracts and the Atos framework agreement), the key intended savings would arise from changes in the editorial service or footprint and it is not clear whether and when these changes will actually occur. This includes, for example, phasing out certain MW radio services and a reduction in the number of video streams on digital satellite.
- 3.55 Despite long-term contracts in the traditional distribution category and the extent of identified cost savings, there are also possible sources of increased burden and some future uncertainties – for instance, around the extent of the BBC’s commitment to expanding its HD services in future (i.e. beyond those already announced) and the timing of any move toward a DSO for radio. The BBC has also undertaken to co-fund, with the commercial radio sector, Arqiva and Government, an increase in the coverage of commercial local radio multiplexes to c.90%.
- 3.56 Assuming a cost inflation rate of 3% between now and 2017 affecting some of the underlying traditional costs (and assuming no cost savings from editorial re-positioning, an expenditure-neutral outcome on any spectrum re-configuration to enhance HD and no change in the BBC’s share of Freeview and Freesat costs), the traditional distribution bill might rise to £230m from £203m. Within this, the BBC’s intended launch of additional HD services (at an incremental cost of £[X] over the current licence-fee period) is easily accommodated; moreover, the benefits of the expanded HD portfolio – in form of protecting the DTT platform, maintaining reach and relevance and increasing audience appreciation – may be considerable.
- 3.57 There is greater uncertainty about future costs in relation to online distribution. One source of cost containment is the potential use made by the BBC of content delivery systems provided by the operators of managed platforms – BT for the YouView platform, for example – which may allow the BBC to reduce variable costs. This might have to be considered against the potential effect that favouring managed TV platforms might have on broadband take-up (an issue that is beyond our scope) and whether the BBC’s broader interests are better served via promotion of net neutrality over the use of managed TV platforms. In any event, the move to standardise distribution online and to connected devices, and the greater transparency about future costs that this confers, are also likely to improve the per-unit outcome whatever the ultimate balance between managed platforms and IP delivery turns out to be.
- 3.58 More broadly online distribution costs are set to rise in the aggregate in line with consumption even if unit costs fall further, as most analysts expect. This is due to the expected continued growth in non-linear demand, which the BBC will need to meet in order to continue to remain relevant in terms of its public purposes and commitment to universality.
- 3.59 The BBC has anticipated this within the DQF budget allocation for online distribution and has set aside significant funds to ensure the BBC keeps pace with the evolution of technology and consumer behaviour. In the latest financial forecasts, as approved by the Finance Committee and within the DQF budgets, the BBC is expected to spend an additional £[X] between now and 2016/17 on infrastructure, and has budgeted a £[X] increase over that period in CDN costs (linked in large part to

increased forecast traffic of the iPlayer). On the BBC's current estimates, CDN costs will be £[X] in 2016/17, compared to £[X] in 2012/13. The budgeted increase appears prudent:

- We forecast that on-demand consumption of TV programmes will more than double between now and 2017. Assuming savings as a result of further unit cost reductions in CDNs and streaming costs, savings via the BBC's standardisation programme, and further deployment of cost-effective "managed" TV platform delivery networks, we would expect the like-for-like direct costs for the BBC's online distribution to rise to c.£40m by 2016/17 from £24m in the current year (not counting any share of YouView costs in that year). This increase is in line with management forecasts.
- Put another way, we forecast that IP-delivered iPlayer streams are likely to rise from c.600m hours currently to c.2bn by 2017 (i.e. we discount in this calculation less bandwidth-hungry non-iPlayer content distribution). At today's costs, this would imply a CDN bill (the principal variable, traffic-related cost) of £[X] by 2017. Unit costs would only have to decline by 13% from current levels for the BBC's forecast of £[X] in CDN costs by 2017 to be achieved – well within our unit cost reduction expectations.

3.60 Taken together, a distribution bill in 2017 of £270m (£230m for traditional and £40m for the direct costs of online, not counting YouView) would come in at around 7.3% of the (flat in nominal terms) licence fee, and this assumes no additional cost cutting alongside a major increase in licence-fee value in addressing increased demand for convenient online content delivery.⁴⁰

3.61 On this wholly notional basis, the BBC, by the end of the licence-fee period, would still be considerably within the overall internal guidance of combined marketing and distribution costs at no more than 10% of the licence fee, as illustrated in Figure 11.⁴¹

Figure 11: Summary of BBC's distribution expenditure as a proportion of the licence fee (Source: BBC, Mediatique estimates)

	2012/13	2016/17**
Traditional Distribution Cost*	£203m	£230m
Online Distribution Cost*	£30m	£40m***
Total	£233m	£270m
Licence Fee Received	£3.6bn	£3.7bn****
Distribution Share⁴²	6.5%	7.3%

Mediatique estimate. ** Applying a 3% inflation rate to traditional distribution costs, and in line with Mediatique's estimates on the growth of non-linear viewing and trends in non-linear cost reduction. *Excludes YouView in 2016/17. **** BBC estimate based in household growth and improvements in collection method*

⁴⁰ The licence fee generated £3.6bn for the BBC in the year to March 2013; while the licence fee is frozen in nominal terms until the financial year ending March 2017, household growth and increased efficiency in collection are estimated by the BBC to contribute to £3.7bn in revenue in FY 2017 (<http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/workplan220512.pdf>).

⁴¹ For the avoidance of doubt, we have not attempted to predict the extent of DQF-associated distribution savings (given the editorial ramifications of many of these); nor have we performed a granular exercise around a number of likely one-off costs in future, including for special events including sports and state occasions; nor have we looked to quantify any risks around spectrum re-allocations as a result of Government spectrum policy or any changes to the BBC's investments in TV platforms.

⁴² In 2012/13, the BBC reported an expenditure of c.£69m on marketing, audiences and communications, or 1.9% of the licence fee.

Concluding remarks: Universality and cost effectiveness

- 3.62 Subject to its undertakings on universality and meeting the expectations of licence-fee payers on multiple platforms, the BBC's attention to cost effectiveness is clear. Through various means, including the use of tenders to extract better terms from suppliers and recourse to short-term contracts renewed competitively, almost all components of the BBC's distribution expenditure compare favourably to commercial benchmarks.
- 3.63 Following a period during which costs were threatening to rise quickly as platforms proliferated and the BBC felt compelled to consider all requests for supply, the BBC has now established a cost-effective means of syndicating its programmes to multiple platforms, rooted in the syndication policy agreed with the Trust and via the certification process that allows the BBC to streamline supply and to ensure consistency and fair treatment across intermediaries (the syndication and policy and certification process are discussed more fully in the section on Governance, accountability and internal reporting lines, below).
- 3.64 Historical accounting for online distribution costs does not permit like-for-like comparisons on a consistent basis. More generally, while we are comfortable that the stated costs for online distribution in the 2011/12 period as provided in the Annual Report and Accounts are representative of the BBC's internal definitions, we prefer our definition of costs as this is indicative of all actual expenditure associated with this category. Our base definition of online distribution costs therefore excludes Project expenditure but includes transcoding/encoding costs and references the BBC's share of YouView.
- 3.65 The BBC's core traditional distribution expenditure, £203m in the year to March 2013, is either in line with commercial benchmarks or, where costs are slightly higher than its direct cohort, is justifiably higher when adjusted for coverage and/or contract terms. In terms of delivering on aggregate reach, traditional broadcast represents 98% of the BBC's viewing (either via scheduled broadcast or time-shifted via recording from scheduled), but only 87% of combined traditional/online distribution costs.
- 3.66 The costs of the key elements of the BBC's direct expenditure for online distribution are significantly lower than the commercial benchmark. While this is perhaps unsurprising given the BBC's market share and the benefits of volume, this in no way should detract from the OTG's impressive control of current costs. Due to changes in departmental organisation during the evolution of the iPlayer, we were not able to review the costs of developing this product or to confirm whether the costs were effectively controlled and managed. For current expenditure, the governance, accounting and external supply arrangements appear robust.
- 3.67 While cost effective when compared to commercial benchmarks, online distribution (of the iPlayer only) delivers just over c.2% of the BBC's TV viewing, while the costs associated with delivery of the on-demand service (core traffic-related costs only plus the YouView share, adjusted for iPlayer's share of total streams), is just under 12% of the BBC's total distribution bill. By comparison, as noted above, traditional distribution costs make up 87% of the total, but this delivers nearly 98% of viewing.
- 3.68 Put another way, for each percentage point of viewing share delivered across linear and non-linear, linear distribution represents expenditure of £2m while the non-linear (iPlayer only) distribution expenditure per percentage point of viewing is c.£12m (six times as expensive). On this simple basis, the BBC's expenditure on linear services appears to be far better "value for money".

3.69 However, the two categories of distribution expenditure are distinctly different: the broadcast model is one of relatively high fixed costs delivering highly efficient mass-market viewing, while online has high variable costs linked to point-to-point delivery. Moreover, the BBC is required to remain at least in line with if not slightly ahead of technology adoption and consumer behaviour if it is to remain relevant to all categories of licence-fee payers. In this sense, and provided costs are carefully controlled, distribution decisions are subject to formal and detailed checks and licence-fee value is calculated across multiple user categories, then the BBC can justify its pursuit of a multiple platform/device distribution strategy.

Recommendations: Universality and cost effectiveness

- We advise the BBC Trust to request that distribution expenditure as disclosed in the Annual Report and Accounts be revised from FY 2014 to accord with the approach used by us in this report. For online distribution costs, we advise that the disclosure include the costs of encoding/transcoding and metadata layering and reference to the BBC's share of costs at YouView. Mediatique concludes that these adjustments would more fairly reflect the actual costs of distributing the BBC's domestic services.
- Given that the BBC has established internal guidance that no more than 10% of the licence fee should be allocated to marketing and distribution, Mediatique recommends that the Trust request the BBC to calculate total distribution expenditure as a proportion of the licence fee and publish this figure in its accounts. This would aid in ensuring that outcomes are tracked consistently and transparently, both internally and to external suppliers and distribution partners.
- The commercial benchmarking performed in this report is one means of validating whether the BBC is achieving its "value for money" obligations. We therefore recommend that the BBC periodically review its expenditure (traditional and online) against commercial benchmarks using external, independent experts. This would provide regular and independent confirmation that the BBC's distribution expenditure is in line with commercial trends.

4 Governance, accountability and internal reporting lines

In this section, we consider how the BBC's distribution functions are governed, the process for decision making on distribution issues and how such decision making sits within the broader structure of the BBC.

We also consider how the BBC engages with third-parties and how its distribution objectives are articulated.

We conclude that the BBC's internal structures are generally fit for purpose and internal decision making is undertaken with standard regard for key elements such as fair trading, licence-fee payer impacts, spectrum efficiency and cost effectiveness. Moreover, the BBC's syndication policy is transparent and clearly articulated to third parties. We identify an asymmetry with regard to lines of reporting and governance around traditional versus online distribution, and propose that this be addressed through possible changes to board representation and lines of reporting on a basis to be considered by the BBC. We also endorse a platform review of the BBC's investments in Freeview, Freesat and YouView and propose the empowerment of a BBC body to consider distribution issues in the round.

Internal structures at the BBC

- 4.1 The two chief categories of distribution – traditional and online – are separately operated at the point of delivery and engagement with third-party suppliers and distributors.
- 4.2 Traditional distribution is delivered at operating level via the BBC Distribution department, where there are units dedicated to transmission and operations, platforms, infrastructure, spectrum and investigations and business management.
 - This area oversees all TV and radio distribution, in SD and HD formats, and has primary responsibility for the long-term contracts with suppliers such as Arqiva, Atos (as part of a BBC-wide framework agreement for out-sourced services), SES-Astra and others. All the key supply arrangements are multi-year and largely staggered – for example, there are five separate contracts with SES-Astra for satellite transponders, one of which expires in March 2015.
 - BBC Distribution sits within BBC Technology, Distribution and Archive, a grouping of departments which in turn reports to the Chief Technology Officer, and thereafter the Director of Operations. The internal decision-making bodies (“group boards”) are the Technology Board, the Operations Board and the Operations Group Finance Committee, through which investment and strategy decisions are typically routed, subject to agreed spending levels approved on a multi-year basis with Finance Committee and Executive Board. The ultimate decision-making forums for traditional distribution are the Finance Committee (empowered by the Executive Board) for investment decisions and the Management Board for strategy.
- 4.3 The operation of online distribution falls under the Future Media Group, which oversees the Online Technology Group (OTG), Programmes and On Demand (POD), Business Development and the Chief Operating Officer Group. The FM budget is subject to Finance Committee oversight and Management/Executive Board approval; however, FM can green-light new projects up to £5m (with higher amounts requiring Finance Committee approval). The FM Group Board is responsible for delivering effective governance.
 - The POD group has primary responsibility for the iPlayer, and the OTG secures and monitors a range of technical delivery aspects for online distribution of BBC content, including the

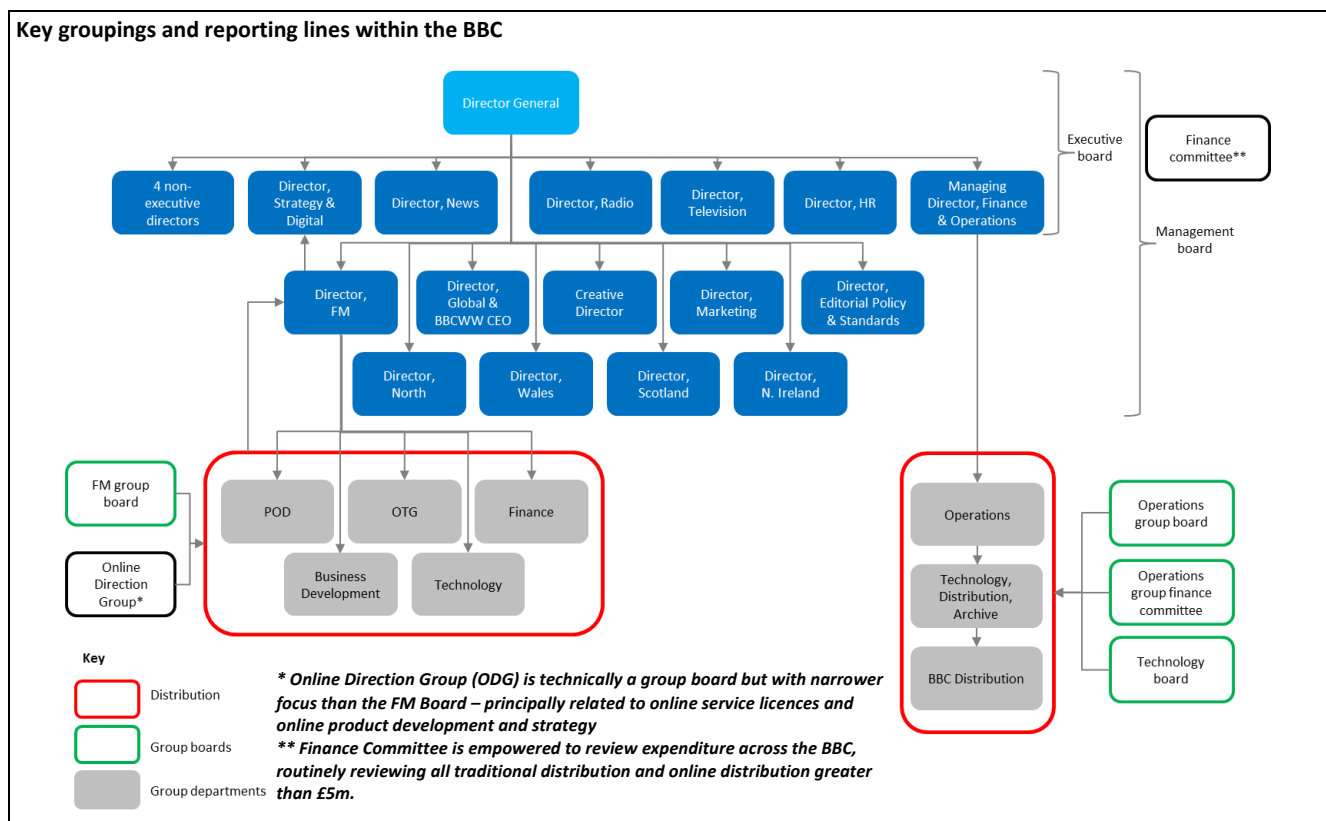
management of CDN contracts.⁴³ The OTG is responsible for contract negotiation with key external suppliers.

- The Online Direction Group (ODG) brings together the Director and Chief Operating Officer of Future Media and other business stakeholders, including the editorial leads from Television, Radio, News and Sport, the Director of Scotland (representing the Nations), the Controller of Strategy for FM and Distribution (member of the Policy and Strategy Department) and the Chief Technology Officer (a member of the Operations Group). This group has chief responsibility for setting strategic direction for online products and for the service licences of BBC Online and BBC Red Button (including iPlayer and bbc.co.uk).
- The FM Group Board has responsibility for agreeing the operating and development budgets of individual departments, subject to Finance approval of agreed multi-year expenditure, and for reviewing and approving new investments (including for online distribution), subject to Finance approval if above the £5m threshold. It has responsibility for delivering value for money and ensuring compliance with BBC policy on investments. It also controls for financial and reputational risk. In keeping with the pace of change in the online sphere, the FM Board has a mechanism to permit urgent escalations to accelerate approvals for investment that fall within its areas and limits of responsibility.

- 4.4 Future Media is represented on the Management Board by its Director, who is not on the Executive Board (the Executive Board member responsible for FM is the Director, Strategy and Digital). The TDA department is represented on the Operations Board via the Chief Technology Officer and on the Management and Executive Boards by the Managing Director of Finance and Operations.
- 4.5 The strategy and policy department of the BBC, reporting to the Director, Strategy and Digital, acts across both traditional and online distribution. There is a head of Distribution Strategy with responsibility for considering the BBC's traditional and online distribution.
- 4.6 For governance purposes, distribution is considered in the round at two levels currently – on an-ad hoc basis via the Access and Prominence Group (see 4.8 below) and at Management Board level between the Strategy & Digital and Finance and Operations functions.
- 4.7 A truncated organigramme, incorporating the key groupings and reporting lines, is at Figure 12.

⁴³ Certain services, including transcoding/encoding and aspects of metadata layering are provided via a contract with Red Bee Media. For historical reasons, this contract sits within BBC Television; there are plans, however, to bring these service elements in house, under the OTG.

Figure 12: key groupings and reporting lines within the BBC (Source: Mediatique, BBC)



4.8 While not enabled as an operational unit, the BBC has formed an Access and Prominence Group (“APG”), which is chaired by the Director, Strategy and Digital and brings together representatives from a range of BBC units.

- This group was established in 2011 in part to develop and communicate the BBC’s syndication policy and more generally to: “ensure consistency of principles developed for third parties” across BBC products online and “strengthen relationships between departments within the BBC.” The mission statement of the group is to “set and drive strategy to optimise the accessibility and prominence of the BBC’s services on third-party platforms.”
- The APG is now a key forum in which the BBC develops its broader policy positions on prominence for BBC content and addresses its objective of reducing the costs the BBC incurs in being available on a range of platforms, in return for recognition of the value the BBC confers to these platforms by making its content available.
- Its membership includes the Director of Policy and Strategy, the Controller of Policy and Regulation, the Director of BBC Distribution, representatives from Future Media (Business Development and POD), one each from Television and Radio and Global News, and the BBC’s Director of Marketing.

- 4.9 The BBC is a shareholder in Freeview, YouView, Freesat and Digital UK⁴⁴, and responsibility for overseeing these relationships lies with the BBC directors having seats on the relevant boards.
- In the case of Freeview, the directors are the Director, BBC Distribution and Director, Creative Services.
 - YouView's BBC director is the Controller of Research and Development.
 - For Freesat, the BBC directors are the Commercial Director and the Controller of Commercial Strategy.
 - For Digital UK, the current BBC directors are the Director of Distribution and the Head of Distribution Strategy.
- 4.10 There is no formal consideration of the relevant shareholdings across these joint ventures below Management Board level. However, an ad-hoc group has been formed to consider the BBC's free-to-air platform strategy across the market, with the aim of informing wider decisions about the BBC's financial and strategic commitment to these entities.
- 4.11 A recent internal review of the BBC's technology functions has led to a number of recommendations that may have an impact on distribution choices and governance.
- In particular, the BBC is considering creating a technology architecture council (led by a "chief architect") to ensure that technological developments across the BBC are considered and co-ordinated centrally.
 - The BBC also believes there may be scope to revise the current organisational structure, particularly to support the creation and delivery of connected and converged content alongside traditional activities.
- 4.12 The BBC has also established a broader strategy review, reporting directly to the BBC's new Director General and Director, Strategy and Digital. Any organisational restructuring to ensure a holistic consideration of both traditional and online distribution strategy will likely to be subject to the outputs of this strategy review.

Review of internal decision-making processes

- 4.13 Where there is a pre-agreed strategy and agreed budget lines (for example, via multi-year commitments with core suppliers), day-to-day management of traditional distribution is handled at the operating level.
- 4.14 When significant initiatives to revise the BBC's distribution strategy are contemplated, internal sponsors from the relevant operating department must seek approval from various boards – for instance, Technology, Television, Operations – before going before the Management Board and/or the Finance Committee. The final stage is the tabling of recommendations to be considered by the Executive Board, and agreement on any periodic review of implementation and future monitoring. When appropriate, strategies and decisions are subject to approval by the BBC Trust.
- 4.15 There are agreed templates for BBC Distribution covering the investment case for all new distribution propositions, which vary depending on the size of the proposed investment. These documents

⁴⁴ DUK now incorporates the DTT Multiplex Operators group (DMOL), a restructuring finalised in January 2013.

routinely cover the broad areas of fit with purposes, audience impact, cost effectiveness, fair trading and consistency with the framework strategic objectives agreed with the Trust.

- 4.16 In the case of competitive contracts, the operating team is empowered to secure bids, and these are reviewed and then subjected to further consideration by the Finance Committee and the Management Board. For example, the BBC recently concluded a procurement process to renew the analogue radio contract, currently provided by Arqiva; this contract was awarded to the incumbent in the summer of 2013.
- 4.17 Given the nature of these approval processes and internal structures, decisions on distribution strategy and interactions with third-party suppliers and partners are well documented by the BBC. We have analysed two examples which illustrate the parameters of decision making within the BBC – the decision to put BBC Alba on Freeview in 2011 (at the expense of some radio stations during Alba’s broadcast hours) and the planned changes to the BBC’s HD distribution footprint.

Figure 13: the decision making process around the distribution of BBC Alba (Source: Mediatique)

- When the service licence for BBC Alba was agreed with the Trust, the BBC undertook to put the service on Freeview in Scotland as soon as practicable, and certainly from DSO in 2012; in the interim the service was available on satellite and, from mid 2011, on Virgin in Scotland. However, it proved difficult to find adequate spectrum for the service following the transition of one of the BBC’s multiplexes to the T2 standard for HD channels.
- As a result, the BBC undertook a detailed analysis of spectrum allocation and service options, concentrating on the trade-offs available and the impact these were likely to have on licence-fee payers in Scotland. As part of this work, the BBC analysed the viewing and listening shares of various BBC services on Freeview, including BBC Parliament, red button services and various radio stations simulcast on the Freeview platform. This analysis was cross-checked against the availability of relevant services on other platforms (satellite, FM, DAB) to determine whether licence-fee payers in Scotland would be able to receive services on other platforms and by alternative means were they to be no longer broadcast via Freeview.
- Based on this analysis, the BBC determined that the least impact (subject to cost considerations) would result from the replacement on Freeview of 13 radio stations in Scotland during the hours of Alba’s transmission (given that these were available elsewhere). For example, Radios 1, 2, 3 and 4, along with Radio Scotland and Radio nan Gaidheal, would all be available on FM, while Radio 5 Live would be receivable via AM (medium wave). In addition, all of these services would be available on DAB and on digital satellite (Sky and Freesat), and streamed via the internet. In addition, six digital-only stations, 1Extra, 4Extra, 5Live Sports Extra, 6Music, BBC Asian Network and the BBC World Service would be available on DAB, digital satellite (Sky and Freesat) and the internet.
- A range of options were specifically explored that would have permitted all services to be retained (for example, securing an additional slot from commercial multiplex operators, building a seventh multiplex for Scotland) but these were rejected on the grounds of significant cost that would outweigh the benefits accruing to licence-fee payers in Scotland.
- Following a period of consultation, and further interrogation by the Trust, the solution of dropping the 13 radio stations from Freeview in Scotland (but only during the hours when BBC Alba was broadcast) was agreed; however, the BBC Trust subsequently challenged BBC management to explore further cost-effective ways of accommodating at least some of the services earmarked for departure from Freeview platform. Following a technical review, the BBC was able to identify spectrum to retain three of the 13 stations initially identified for exit from Freeview. At this stage, the BBC elected to select the candidates for retention from among those services that were not available on FM, and from these choose the final three. Based on listening share in Scotland via Freeview, the stations retained for 24/7 distribution on Freeview in Scotland were Radio 5 Live, 1Xtra and 6Music.

Figure 14: the decision making process around the distribution of BBC's HD services (Source: Mediatique)

- The BBC has identified HD as a relative priority, given consumer preferences, the strong growth registered by pay TV-operators with HD offerings and the emergence of HD TV sets as increasingly the standard for new equipment sales. In response to market developments, the BBC considered that it would be disadvantaged were it not to be able to offer at least its core channels in HD format. A transition from SD to HD on DTT also confers spectrum efficiency advantages as the services are transmitted on the more efficient DVB-T2 MPEG 4 standard and promotes platform competition, particularly enhancing consumer choice between free and pay platforms.
- The BBC currently has two HD channels – BBC One and BBC Two (with Nations variants for BBC One). These are available on Freeview, satellite and cable. Following the DQF process, it was agreed that the BBC would close its BBC HD channel and replace it with BBC Two in HD. As a result, there was significant programming created in HD that no longer had a place in the HD linear schedule (in particular, content made for BBC Three, BBC Four and the children's channels). Some of this content is being made available on the iPlayer in HD (c40 hours of fresh content per week, out of a total of c.640 hours per week).
- It had been planned for there to be up to five HD services on the PSB3 HD multiplex – BBC One, BBC Two, ITV, Channel 4 and Channel 5. However, Channel 5 elected not to take up its allocated stream and this fifth HD slot therefore remains vacant. The BBC sought to auction the capacity on a relatively short-term basis to a third party, with the flexibility of recovering the capacity at a point in the future should its own HD plans evolve. This auction was halted following a decision to use the capacity for the BBC's own HD services.
- A number of developments led to a rethinking of the HD strategy since the DQF process was finalised. For example, it has been decided by Ofcom in line with international spectrum planning to look to clear the 700 MHz spectrum for use by mobile operators by 2018. For this to happen, some of the digital TV services currently occupying 700 MHz would need to move – potentially to the 600 MHz spectrum recently cleared as a result of the digital switch-over plan. In July 2013, Ofcom awarded interim licences to Arqiva for the deployment of services at 600 MHz and the BBC confirmed it would take up two slots here for HD channels. With its own Multiplex B/PSB3 capacity and the additional interim slots from Arqiva at 600 MHz, the BBC will launch five additional HD services from 2014 – BBC Three, BBC Four, CBeebies, CBBC and the BBC News Channel.
- The process leading to the decision (approved by the Trust) to launch the additional channels included board review at Television, Operations, Finance Committee and Executive Board. The key considerations included trends in relation to the take-up of HD-enabled equipment, the gap between the BBC's HD portfolio and those of other PSBs, the availability of HD-enabled DTT spectrum on the BBC's PSB3 multiplex that had been left unused, identified consumer (licence-fee payer) demand for HD and the prospect of cost-effective access to the interim multiplexes being launched by Arqiva at 600 MHz.
- Broader considerations included enhancing the appeal of "free" platforms such as Freeview and Freesat compared to pay-TV platforms and improving the competitive advantage of DTT over the longer term. [X]
- The BBC's own HD slot on PSB3 addresses 98.5% of UK homes (subject to the availability in the home of HD-enabled equipment). Two channels that currently share an SD slot (BBC Three and CBBC) are being assigned this so-called "universal" slot owing to the amount of HD programming already made for the channels, their relative popularity and the amount of special live event programming shown (e.g. on BBC Three). The remaining new HD channels will be on the interim multiplexes, with target coverage of 70% by summer 2014.
- The total incremental cost of the HD channels has been estimated by the BBC at £[X] over the current licence-fee period.

4.18 Similarly to the templates used for traditional distribution, the FM group prepares standard materials for the consideration of investments and strategic direction for online services, which cover key elements of fair trading, value for money and audience impact as a minimum.

4.19 Decisions relating to online distribution are typically subject to greater uncertainty than traditional distribution, reflecting the nascent nature of distribution to online platforms and the relatively quick

evolution of the supply chain, pricing, standards and underlying technology. As a consequence, online distribution decisions are required to be taken more quickly and more often, in line with the fast pace of change. For key external supply contracts, arrangements may be in place for a year or less, compared to the multi-year contracts agreed for traditional distribution, where prices and the dynamics of the supply chain tend to evolve more slowly.

- 4.20 This has consequences for the decision-making process within online, which must be relatively supple and responsive. For this reason, some distribution decisions can be made without reference to higher boards, provided the expenditure is relatively small (less than £5m) and where it is already covered by pre-agreed divisional budgets.
- 4.21 Although traditional and online distribution are considered separately within the BBC, online decisions are still subject to a similar degree of oversight and accountability in terms of compatibility of decisions with broad strategy, routine reference to market trends and other external data, and specific requirements around considerations of audience impact, fair trading and cost effectiveness. Moreover, the broad framework established as a result of DQF around the BBC's "four screens" distribution strategy provides clear lines to direct key decision making and to inform the review of options and on-going monitoring. We explore this framework in greater detail below.
- 4.22 The timing and sequence of the BBC's launch of its services to phones and tablets provide a further indication of how online distribution decisions are determined. In considering the sequencing and timing of launches, a number of factors were (and are) considered, including the size of the addressable market, technical impediments, cost, brand attribution and audience/user impact. We set out an overview of this in Figure 15.

Figure 15: rationale for the timing and sequence of the launch of BBC mobile services (Source: Mediatique)

- The initial iPlayer, News and Sports apps were developed for the iOS Apple standard, given technical factors (a single standard), market share (both the iPhone and iPad established a clear, early market advantage) and cost (developing an app for the Apple standard was highly cost effective as there was only one set of technical standards to meet).
- Thereafter, the BBC began the more onerous task of ensuring distribution of its services on the Android platform. This proved relatively difficult for two principal reasons. First, the Android platform itself went through major technical iterations over time. Between 2010 and late 2012, there were four different standards for Android devices, and the BBC was intent on ensuring that all devices (even those operating on "old" standards) would be able to access its services.
- Meanwhile, the BBC had chosen Flash to support its Android app; however in the course of 2012, Adobe (the promoters of Flash) announced it would no longer support the standard on Android. In order to ensure that all Android devices could support the iPlayer (and later iPlayer Radio), the BBC looked at a number of potential solutions following Adobe's strategic exit from Flash, including using the HLS standard. However, this would mean abandoning a number of existing devices in the UK that do not support HLS.
- In the end, the BBC developed the Media Player, a separate bespoke app (downloadable to Android devices) that allows all versions of Android to play BBC A/V content.

Principles framing decisions on distribution

- 4.23 The overriding principles governing the BBC's approach to distribution of its services are contained in relevant sections of the Charter and the BBC Agreement. This includes the BBC's undertaking to distribute the BBC's UK services ("or elements of their content") to "viewers, listeners and other users

(as the case may be)...in a range of convenient and cost effective ways which are available or might become available in the future.”⁴⁵ The BBC is also obliged under the Agreement to put its “principal” digital TV services on DTT. As confirmed in DQF, the Trust requires the BBC to ensure that every household has “convenient access to each relevant BBC service, free at the point of use.”

4.24 The BBC operates generally under a universal service obligation and must be available on all TV platforms⁴⁶:

- Carriage on cable is subject to a backstop “must-carry” obligation, which in fact has not been enacted as the cable operator benefits from an exemption in the Copyright Act allowing it to re-transmit free-to-air channels with no payment.
- BSkyB is not an electronic communications network under European legislation and therefore is not obliged to carry free-to-air channels, but must as a regulated provider of technical platform services offer fair, reasonable and non-discriminatory (FRND) terms to all channels seeking carriage on its satellite platform. This has meant in practice that PSB broadcasters are obliged via their universal delivery obligations to seek carriage on the digital satellite platform but must pay for the privilege (although in return they are granted appropriate prominence on electronic programme guides). These arrangements are currently being debated.

4.25 The BBC is also subject to undertakings on fair trading (consistent with European rules) and on a range of engagements with the BBC Trust, specifically regarding service licences, performance against objectives, value for money and other criteria.⁴⁷ In some cases where the BBC contemplates moving into a new service area, a market impact assessment (“MIA”) is required from Ofcom (as part of a broad Public Value Test); for instance, this was the case for the original iPlayer and associated on-demand services over the internet, reviewed by Ofcom in 2006.

- In its assessment of the iPlayer, Ofcom offered some useful language around the balance between the BBC’s public-service objectives and the potential for it to generate negative impacts on the wider commercial market. In the MIA overview, Ofcom wrote:

“We believe it is important that the BBC should take a proactive and forward-looking approach to reflect likely changes in audience behaviour and expectations. We also believe the BBC should be enabled to participate actively and fully in emerging markets. The BBC is the cornerstone of public service broadcasting in the UK, funded by all of us as licence-fee payers. As the internet grows in importance as a medium, the public will therefore rightly expect BBC television and radio content to be made available online and on demand. There are clearly very considerable public benefits to be gained from the BBC using new technology and new media to enhance and extend existing services into new markets.”

⁴⁵ The key clause reads in full as follows: “The BBC must do all that is reasonably practicable to ensure that viewers, listeners and other users (as they case may be) are able to access the UK Public Services that are intended for them, or elements of their content, in a range of convenient and cost-effective ways which are available or might become available in the future.” – Clause 12(1), BBC Agreement, 2006.

⁴⁶ Under the “must offer” terms in the Communications Act, 2003 (consistent with the European Audio Visual Services Directive), the BBC must ensure that its public services in digital form are “at all times offered as available (subject to the need to agree terms) to be broadcast or distributed by means of every appropriate network.” For the purposes of the Act, an appropriate network is any that is “used by a significant number of the persons by whom the broadcasts are received in an intelligible form as their principal means of receiving television programmes.” See the Communications Act (2003), particularly section 272.

⁴⁷ Fair Trading is referenced both in the BBC’s Charter and in the Agreement, and is subject to the Guidelines agreed with the Trust. These were most recently reviewed by the Trust in 2011/12, and the latest guidelines were published in mid 2012. See <http://www.bbc.co.uk/aboutthebbc/insidethebbc/howwework/policiesandguidelines/fairtrading.html>. The guidelines recognise the potential impact on wider commercial markets of activities by a Corporation funded by licence fee and provides safeguards to minimise such impact.

“...However, it is also important that the BBC’s involvement in the market for on-demand services should contribute positively to the development of the market as a whole. It would not be in the wider public interest for the BBC’s involvement to restrict competition, innovation or choice. There is a balance to be struck. It is appropriate for the BBC to respond to the fact that licence-fee payers are increasingly attracted to new on-demand markets. It is also appropriate to acknowledge that, unchecked, the BBC’s power in nascent markets could harm the stimulus of competition necessary to ensure quality content for the long term.”⁴⁸

- 4.26 In iterations with the Trust, the BBC’s distribution strategy has been most recently articulated in detail via the *Putting Quality First* strategy review, which culminated in the publication of DQF in 2011 in the wake of the licence-fee settlement lasting through to 2017.⁴⁹ The final form of the DQF action plan was agreed by the BBC Trust in 2012, and is the framework for broad expenditure plans BBC wide.
- 4.27 As part of the conclusions of DQF, the BBC Trust reiterated the principle of universal access to BBC services – “that is, that the BBC should seek to ensure that every household should have convenient access to each relevant BBC service, free at the point of use.” The BBC, in conjunction with the Trust, may consider distributing services on platforms that are not universal, provided other objectives are met. For example, the Trust approved the distribution of the iPlayer on mobile devices, on the expectation that penetration of these would grow and that a significant number of licence-fee payers would find these services relevant over time. It is up to the BBC to ensure that these services are delivered on a cost-effective basis, subject to the Trust’s review.
- 4.28 The DQF document addressed a range of issues related to distribution, specifically reflecting the effect of changes to distribution that would contribute to cost containment in line with a decline in real terms in the funds generated by the licence fee in the current period. The key distribution-linked cost containment measures from DQF are summarised in Figure 16.

Figure 16: key distribution elements contained in DQF (Source: BBC)

According to PQF, The BBC has established internal guidance that no more than 10% of the licence fee should be spent on distribution and marketing. In its final proposals under DQF, the BBC is targeting £21m worth of distribution savings per year by 2016/17. This is to be achieved by making the following changes:

TV

- A phased reduction in Red Button services to one stream per platform (post Olympics) (*complete*).
- Closure of the BBC HD Channel and replacing it with BBC2 HD (*complete*).
- A review of the number of regional BBC TV services available on digital satellite, with the aim of reducing these and thereby making distribution savings.
- Reducing the BBC’s reliance on its own systems, adopting “industry-standard solutions” (thereby reducing maintenance and support costs).
- Fewer centres to play out BBC programmes and services.
- Considerations to be taken in relation to renewal of Atos contract in 2015.
- Closure of news multi-screen (*complete*).

Radio

- Reduction in medium-wave transmission for local radio in England in places where coverage duplicates FM.

⁴⁸ The full text of the Ofcom market impact assessment can be found at <http://stakeholders.ofcom.org.uk/market-data-research/other/tv-research/bbc-mias/ondemand/bbc-ondemand/?a=0>. Note that the date on the cover page of this report is incorrect; it was published in January 2007, not 2006.

⁴⁹ The DQF process involved extensive consultation, options development and financial modelling, much of which has been reviewed by us as part of preparations for this report.

- Long-term ambition to transition from long wave to DAB. There will be no new investment in LW radio, and current kit will be allowed to fail.

Online

- Sharing of technical platforms, data and code.

- 4.29 It should be noted that significant cost savings are likely to require changes to editorial propositions to be fully realised. For instance, in order to clear a full satellite transponder (thus saving the costs wholly), the BBC would need to remove, for example, some regional BBC One variants, certain Nations versions of BBC Two and all radio services from digital satellite. Such changes would require Trust approval.
- 4.30 Following completion of DQF, a number of updates and re-forecasts have been presented to the pan-BBC Finance Committee by BBC Distribution to update progress toward meeting DQF objectives.
- 4.31 A number of re-forecasts and updates have also been developed by the OTG, reflecting both the uncertain nature of pricing in relation to online distribution in a fast-moving and competitive environment and the difficulties of forecasting usage in the future across multiple platforms. These have been reviewed by the FM Group Board (and when necessary by the Finance Committee).
- 4.32 In light of evolving consumer behaviour and changing technology, the BBC aims to safeguard its commitment to research and development, including carving out a digital innovation fund aimed at supporting “the BBC’s vision for connected broadcasting and the digital archive.” The vision incorporates the BBC’s “four screens” strategy, and includes efforts to create a permanent archive of BBC content, available via a mix of public and commercial means.
- 4.33 The four-screen approach to the distribution of BBC content is in part an output of the development of the BBC’s syndication policy, which governs the terms under which the BBC’s on-demand content (including iPlayer, News and Sport) is made available to multiple platforms, operating systems and aggregators. Following extensive engagement with the Trust and industry consultation, a revised syndication policy was approved in final form in June 2012 and governs all third-party distribution of BBC public- service content.⁵⁰
- According to the policy, “BBC Content will usually be made available within a BBC Product. A BBC Product is a managed application that aggregates BBC Content to enable audiences to discover and consume relevant content within a single coherent environment.”
 - In deciding when and how to syndicate, the BBC will ensure that it “make[s] its products and services as widely available as possible in order to maximise the reach, impact and value for money of its content, and to further its public purposes.” Critically, the BBC states that “not all requests for syndication arrangements will be immediately supportable and in any event can only be undertaken where they demonstrate value for money for licence-fee payers.”
 - The distribution of the BBC’s online products is subject to a number of rules including that they be easily discoverable, appropriately prominent, and capable of being changed efficiently when so desired by the BBC. There can be no incremental charging for BBC content (for example, on pay-TV platforms, the content must be available at the “entry” level or equivalent), no advertising, and no payment to view. The BBC insists on parental controls, and requires that any deep linking

⁵⁰ The guidelines are available in full at:

http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/policiesandguidelines/pdf/syndication_guidelines_june_2012.pdf.

available on a platform – for example, backward scrollable EPGs and advanced search capability – be made available for BBC content as well.

- 4.34 In general, the BBC seeks via the syndication policy to standardise availability of its three key products – iPlayer, News and Sport – on all compliant platforms in order to secure, among other objectives, value for money. Only in “exceptional circumstances” will it agree to distribute on a bespoke basis. Notably, the BBC has agreed to put iPlayer on the Sky On Demand platform, which does not have a browser and cannot support a standard BBC Product, but only after agreeing editorial controls, branding and access to data arising from usage on the platform.
- 4.35 Consistent with this approach, the BBC rejected a request from Sky for BBC content to be available via Sky’s mobile and tablet applications as the degree of editorial control, prominence and other requirements could not be delivered on these platforms. Similarly, the BBC rejected a request from Virgin to allow the BBC’s linear TV services to be streamed live on the Virgin Anywhere service. The BBC has also declined to supply Apple TV, where it was concerned that the BBC would not exercise adequate control over the user experience. It also invoked implicitly the “value for money” argument as Apple TV has very few UK users.⁵¹

Figure 17: implications of the Sky-iPlayer carriage deal (Source: Mediatique)

- Where distribution of online content is non-standard a bespoke development is required. This will only be undertaken in the event that the addressable platform is of sufficient size to warrant the costs of engaging on a non-standard basis. In the case of Sky, its subscriber base – at roughly 10m – was of sufficient size to warrant consideration for a non-standard approach, while the lack of a standard “over the top” delivery capability (the Sky set-top box acts as a gateway) meant that a BBC Product was not an option. In a decision taken at Management Board, at the direction of the Director General and informed by Strategy, the BBC entered into negotiations. The resultant terms, which explicitly addressed the BBC’s requirements on prominence and the exercise of editorial control, were tabled initially at the FM Group Board and the APG, and then sponsored at Management Board level by the Director of FM.
- The terms under which the iPlayer was made available to Sky are indicative of the inter-connected nature of access, prominence, distribution, licence-fee payer expectations, platform competition and other fundamental issues.
- The Sky-iPlayer carriage deal became connected to a wider agenda at the BBC to promote net neutrality and to ensure that the BBC could contain its distribution costs and reduce impediments to its ability to address licence-fee payers directly. In response in part to the BBC’s willingness to supply the iPlayer to Sky, the latter introduced a discount to suppliers of Players (e.g. the BBC, ITV, Channel 4) that led to a reduction in the platform contribution charges payable to Sky by channel suppliers.
- Among other factors, this has encouraged the BBC to seek to reduce its access (and even distribution) charges to zero on as many platforms as possible, in recognition of the value that the BBC confers through the availability of both its linear channels and the iPlayer on TV platforms and portals and with the aim of reducing what might otherwise be an escalating and potentially uncapped liability in the future.
- Coincident with the agreement between Sky and the BBC, Sky also moved to permit any ISP to be connected to its TV service, thereby enabling access to the iPlayer on Sky via any ISP supplier. We dealt in detail with the costs of platform access and the BBC’s distribution strategy in the section “Universality and cost effectiveness”, above.

- 4.36 Efforts to standardise delivery have led the BBC to focus on a number of policy objectives to ensure it is able to address licence-fee payers on their chosen platforms and devices as cost effectively as possible. For example, the BBC supports the broad principle of net neutrality, whereby there should be no discrimination in favour or against any particular content or service delivered via the internet. The

⁵¹ The details of Syndication requests and the BBC’s response are reported every six months to the Trust for monitoring; Mediatique reviewed the update given to the Trust in June 2013, from which the details outlined here are taken.

BBC is also exploring how it might ensure that the guidelines on appropriate prominence on traditional TV platforms be extended to online platforms as well. These policy objectives are understandable, given that the BBC is not easily able – unlike its commercial competitors – to trade in financial or supply terms in order to ensure access and prominence.

- 4.37 An adjunct to the syndication policy is the BBC’s certification process, a standardised approach to engaging with device manufacturers, aggregators and platforms that request access to the BBC’s online content such as the iPlayer. The Business Development department of FM has responsibility for negotiating commercial terms with device manufacturers and platform operators, subject to the technical issues related to certification.
- 4.38 The BBC has developed the TV Application Layer (“TAL”) to permit a standardised deployment of BBC services (notably the iPlayer, BBC Sport, BBC News and services under the connected red button) to a wide range of devices, including some managed TV platforms (e.g. Virgin, YouView), IP-enabled TVs and games consoles.⁵²
- 4.39 Taken together, the certification process and the syndication policy are aimed at achieving the BBC’s objectives for standardised distribution to online platforms, consistent with potential audience size, licence-fee payer expectations, value for money principles, editorial control, branding and user experience. This marks an evolution in the BBC’s engagement with distribution third parties, following a period where the BBC was asked to create bespoke and often expensive iterations of its content propositions to accord with a wide array of partner requirements.
- 4.40 While less developed than the connected TV strategy, the BBC’s distribution to mobile phones and tablets is also being standardised and formalised, to reduce the amount of re-purposing required to address different mobile platforms. The same principles are being followed, namely that the BBC will not withhold key products from any platform that meets a threshold, reflecting penetration, technical factors, editorial control and cost effectiveness.

Communicating distribution policy to external parties

- 4.41 The BBC openly and transparently benefits from the appeal of its “online” services, and in particular iPlayer, which is seen by device manufacturers (TV, tablet and mobile) as a “hygiene factor” required to be included on all A/V services. As a result, the BBC has enabled to a significant degree the standardisation envisaged in the syndication policy and certification process.⁵³
- 4.42 The BBC communicates the key principles underpinning its distribution strategy with key suppliers and partners in the course of day-to-day relationships underpinned by long-term contracts.
- 4.43 The BBC also communicates its purposes through key policy documents, in particular the syndication policy and the certification process for online distribution.
 - The syndication policy is subject to a review by the BBC Trust every six months to ensure that the BBC is compliant with the requirements of the policy. For example, in the update provided to the Trust in mid-2013, it was confirmed that a number of requests for a standard product for iPlayer

⁵² The BBC has also made the TAL available under an “open source” licence to broadcasters, content providers, equipment manufacturers and platform operators.

⁵³ In a recent engagement with a TV manufacturer, the BBC insisted that a particular model of TV set be equipped with a standard remote control to give users the ability to “press red”; the original plan had been to provide a “wand” to interact with the TV screen. In order to secure the connected TV iPlayer product, the manufacturer agreed to ship the TV with both a wand and a traditional remote control.

were still in testing phase, while requests for non-standard access (for Apple TV and for the “Go” versions of Sky and Virgin related to BBC content) were rejected.

- The pack of certification documents is available upon request from the BBC, upon signature of a non-disclosure agreement. The pack provides all the technical specifications of the BBC’s online availability, along with self-testing software (the “CATAL”), which permits a distribution partner to test whether its own platform can meet all the conditions of distributing the BBC’s Products using the TAL. Once the potential distributor has successfully tested its technology, including the user interface and user experience, the BBC then conducts its own tests. Assuming all CATAL and broader syndication criteria are met, the BBC then approves the distribution contract.
- In practice, the BBC maintains significant contact between applicants and the CATAL team, as software is tested. There can be significant bottlenecks in busy periods, particularly in spring of each year where the BBC can have up to 25 applicants at any one time as new TV sets and other devices are launched. The process is similar for mobile devices and tablets, although more challenging given the relatively nascent nature of these markets and the number of different standards and formats.
- At last count more than 600 different devices and platforms, including various connectable TV sets, games consoles, tablets and smartphones, are able to distribute BBC content.

4.44 In the crucial area of syndicated BBC content on third-party platforms, the BBC is required to manage the positioning of any brand marketing used by these third parties promoting the availability on their services of the BBC content. The BBC communicates its requirements via bilateral discussions between, for example, the Business Development department of Future Media and connected TV propositions, informed by input from Fair Trading.

4.45 More broadly, the BBC articulates its wider objectives around distribution through engagement with government and regulatory bodies. This includes submitting responses to consultations on key distribution issues such as ensuring PSB-consistent access on third-party platforms and appropriate prominence. Recent examples include providing input to the policy paper of the Department for Culture, Media and Sport⁵⁴ and to the recently published European Commission Green Paper on connected TVs.⁵⁵

Key metrics considered when measuring distribution outcomes

4.46 Throughout the approvals process for investment on distribution, and in setting the key planks of distribution strategy, the relevant departments and divisions routinely consider a range of metrics to evaluate propositions and to monitor ongoing performance. Foundationally, the measurements around RQV are all specifically considered, with the impact on licence-fee payers evaluated for material decisions. Also key are the technical costs and hurdles, which may dictate the sequence of investment, timing of launch and characteristics of delivery.

4.47 In evaluating distribution options, the BBC tracks a number of developments, including platform penetration, consumer take-up of devices and content consumption, using a mix of internal and external data. Examples include the extensive modelling and sensitivities considered for proposed changes to distribution of the BBC’s HD channels and the regular market updates produced for FM on

⁵⁴ See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225783/Connectivity_Content_and_Consumers_2013.pdf

⁵⁵ See https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/convergence_green_paper_en_0.pdf.

device use and iPlayer consumption. An example of the level of data compiled and analysed can be found in the BBC's Mobile and Tablet Report, January 2013, which includes an overview of mobile and tablet use, appreciation indices, unique browser numbers and detailed information on market shares by device and manufacturer.⁵⁶

- 4.48 The BBC is also considering implementing an organisation-wide data strategy in part to improve the level of personalisation of BBC services that might be achieved in the future.

Concluding remarks: Governance, accountability and internal reporting lines

- 4.49 The BBC has in place skilled personnel across both its traditional and online distribution operations, and disciplined systems in place to ensure that distribution decisions are informed by both the foundational objectives of the Charter and Agreement and by various measurements of public value and audience impact.
- 4.50 Investment decisions are subjected to clear and transparent processes internally, including relevant approvals taking into account fair trading, legal constraints and the broad thrust of strategic imperatives as agreed with the BBC Trust. The parameters of the BBC's distribution strategy are articulated via a number of outlets, including through the DQF conclusions, developments in strategy as formulated both at operational level and at Strategy and Policy level, and through specific policies on syndication.
- 4.51 The BBC has maintained a consistent view on public policy issues, working either independently or in co-operation with commercial PSBs and others. For example, the BBC has been a prime proponent of net neutrality and has led the efforts to secure a zero rate for access to TV platforms (in particular, Sky). The BBC has also been a supporter of industry-wide efforts to safeguard appropriate prominence in both traditional and online environments.
- 4.52 Focus and consistency have been achieved across online, connected TV, mobile and tablet distribution via the articulation of the four-screen strategy, supplemented by clear messaging on syndication policy around Products and engagement where necessary on bespoke supply to certain managed platforms. The certification process provides further clarity and transparency, and indeed may accelerate a market-positive move toward common standards in relation to metadata and streaming. On this point, the BBC has established a working group to discuss with other public-service broadcasters the concept of a common approach to metadata tagging.⁵⁷
- 4.53 There has been some concern expressed to us by third parties that the BBC has at times seemed to be "choosing winners", particularly around its sequencing of the launch of mobile apps and its past championing of certain standards over others. It is outside our scope to consider past behaviour (in the period during which the iPlayer was being developed, for example). We can report, however, that the BBC is able to show via documented market evaluation that it aims to take into account developments in the wider commercial market and that it applies strict, common criteria around decisions regarding the distribution of the iPlayer and its News and Sports apps in particular.⁵⁸

⁵⁶ This is an internal document, and is not published.

⁵⁷ The BBC has established the Digital Production Partnership with other key UK broadcasters to develop a common "wrapper" enabling distribution of A/V content with associated metadata.

⁵⁸ The BBC Trust recently published a finding in response to a complaint around the BBC's sequencing of the launch and development of mobile apps, with the complainant maintaining that the BBC unfairly favoured the iOS standard over Android. The complaint was not upheld. See: http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/appeals/cab/Apr_2013.pdf.

- 4.54 There is also a commonly articulated criticism from pay-TV platform operators (specifically Sky and Virgin) that the BBC held back content from pay platforms in order to promote the commercial chances of YouView, in which the BBC has a stake.⁵⁹ The BBC argues that its objectives have always been to ensure the widest possible access to BBC online content, subject only to reasonable conditions consistent with its Charter and Agreement undertakings.
- 4.55 The BBC has been subjected to some criticism from certain shareholders in YouView, around the BBC's decision not to pay any fees to be carried on the non-linear interface of YouView. The BBC's strategic decision to seek a zero cost access to multiple platforms where this is achievable has emerged as a fundamental element of its efforts to contain distribution costs in exchange for conferring benefits on distribution partners via its agreement to supply content.
- 4.56 It is our view that the current review of the BBC's free-to-air platform strategy may help further clarify the BBC's broad distribution goals, including how the BBC sustains multiple routes to market without risking significant disintermediation and ensuring prominence across multiple platforms (thereby maintaining reach and relevance and ensuring brand attribution and credit). A side-by-side consideration of the role the BBC plays in its three JV platforms may signal significant changes in strategy.
- 4.57 In particular, the BBC will be able to consider the characteristics of the YouView platform, which has in practice emerged largely as an element of the triple-play bundling strategies of the two ISP shareholders BT and Talk Talk.⁶⁰
- 4.58 The BBC's traditional and online distribution are governed separately at the operating level – correctly in our view – with the former based on a few, long-term contracts for supply and delivering by far the largest impacts on audience reach and appreciation across TV and radio. Online distribution is managed on a shorter-term and variable basis, with greater freedom to engage with suppliers without escalation to higher authority, within agreed service budgets.
- 4.59 The structure and objectives of Future Media allow decisions to be made on an accelerated basis. The decisions around online distribution are informed by routine collection of key platform, use and audience data and appreciation index scores, thus ensuring relevant changes are made to distribution strategies when necessary. The apparent periodic favouring of one platform over others – for example, iOS over Android – is due largely to technical factors such as changes to operating systems or market share advantages to which the BBC rightly accedes. Thus, decisions around the sequence of launches on competing platforms have been made in the light of technical, market size and other factors, which are clear and robust. While it is beyond our scope to consider editorial objectives, we note that the POD department works closely with its homologues in creative divisions of the BBC, including News, TV and Radio.
- 4.60 The decision-making framework for online distribution strategy and operations appears well supported throughout the organisation, with clear lines of reporting up to and including representation on the Management Board. It is unclear to us whether the same can currently be said of the traditional

⁵⁹ Both Virgin and Sky expressed this view to us in our interviews for this report.

⁶⁰ The shareholders of YouView are presently renegotiating their agreement, and it is possible that new terms will address the issue of the BBC's financial contribution by either formalising a YouView proposition that is practically and cost-effectively available unbundled from an ISP subscription or for which the BBC is not required to contribute as a shareholder but is still able to provide cost free its online services to YouView homes. In July 2013, the BBC Trust announced it would conduct a review "examining how well the BBC's involvement in broadband television service YouView is meeting the conditions set by the Trust" (see http://www.bbc.co.uk/bbctrust/news/press_releases/2013/youview.html).

distribution aspects of the BBC. While there are clear lines of reporting from BBC Distribution, through the Chief Technology Officer and to the Operations, Technology and Operating Group Finance boards, the only Management Board representation from this business line is through the Managing Director, Finance and Operations. The BBC should consider whether the management of the strategically important traditional distribution side of the business is suitably represented – both to ensure fewer layers between the Board and line management and to provide a more informed consideration at Board level of both traditional and online distribution strategy viewed in the round.

- 4.61 This is in our view important as the BBC may need a more formal, ongoing consideration of the traditional and online distribution aspects at Executive or Management Board level, particularly as and when technological and consumer behavioural trends accelerate and patterns change further. How this is achieved is properly a matter for the BBC. We note here that the strategy function does include consideration of both traditional and online distribution, and this has provided useful consistency on a pan-BBC basis.

Recommendations – Governance, accountability and internal reporting lines

- The BBC might wish to consider whether Technology, Distribution and Archive should be represented in a different way through board representation and lines of reporting, on a basis to be determined by the BBC. There is currently asymmetry in this regard between Future Media (online) and TDA (traditional).
- We have identified a need for the BBC to consider traditional and online distribution within a single forum, although we agree that operationally the two are dynamically distinct. A BBC board should be empowered to consider traditional and online distribution in the round.
- The BBC should carefully review its investments in TV platforms, namely Freeview, Freesat and YouView, in light of BBC-wide platform and distribution strategy and in particular its duty to promote the availability of services free (or at no incremental cost) at the point of delivery to licence-fee payers.

5 Fit for future purpose

In this section, we review the degree to which the BBC is adequately taking into account market developments (including technological innovation and shifting consumer behaviour) and whether its governance structures, processes and market evaluations are responsive to potential changes in the dynamics affecting distribution of its UK services on a cost-effective basis.

We conclude that the BBC has identified the key issues that will confront it over the medium to long term, and has considered the range of options available to address future challenges. There is a need for greater sharing of data and insights into technological innovation to ensure all parts of the BBC are informed of evolving sector dynamics. We have identified a growing tension between universality and cost effectiveness, particularly around the availability of BBC services on all platforms and note that the BBC is not easily able, owing to its requirements to be universal and its public funding model, to use commercial leverage when agreeing carriage and access terms (for instance, trading supply for revenue share or prominence on legacy and emerging platforms). Its approach to public policy – supporting net neutrality, the extension of appropriate prominence to non-linear platforms and a zero-rate payment environment for platform access – is clearly articulated and consistent.

- 5.1 A major plank of DQF was to address trends in the cost profile associated with meeting the BBC's key Charter objectives throughout the period of the latest licence-fee settlement. A critical concern was the potentially rising and uncapped costs of distributing the BBC's services to multiple platforms and devices at a time of rapid changes in technology and an evolution in consumer behaviour.
- 5.2 In 2012, iPlayer hours viewed represented just over 2% of BBC TV content viewing, with c.10% of viewing delivered via time-shifting on platform PVRs. Non-linear radio consumption was even smaller, less than 1% of total listening. We forecast TV's non-linear share of 12% to more than double by 2017, and VOD (iPlayer) is expected to represent a much larger share of non-linear viewing by then. The BBC is therefore likely to face a rising cost for online distribution even if the unit costs of online delivery continue to fall. Even as this overall cost burden increases, the BBC will still be required to maintain its traditional distribution footprint.
- 5.3 The BBC is already addressing this challenge. As a result of the DQF process, the BBC has focussed its strategy on a streamlined approach to syndication and a move toward a systematic process around editorial and technical compliance via the certification policy for connected devices and engagement with mobile platforms on the basis of increasingly common standards. The BBC has also engaged on an ad-hoc basis with managed platforms such as BSkyB and Virgin on the terms of supply of content on a non-linear basis. The BBC has made it clear that it will not simply make its content available to any and all platforms, portals and devices but will proceed only in a manner consistent with the syndication policy and its broader strategies and undertakings on brand protection, editorial control and cost effectiveness.
- 5.4 This approach has enabled the BBC to forecast with some greater precision the likely costs for online distribution, although there is still lack of certainty in regard to volumes likely to be generated and the unit costs for key categories where cost deflation has been customary in recent periods. The BBC's response has been to keep contracts with third-party distribution suppliers on a short-term basis, to retain and expand in-house capability and to reserve the possibility of providing online distribution via its own "distributed" CDN architecture.

- 5.5 One over-arching consideration must be to determine whether and over what period of time IP delivery substitutes for broadcast, and what would be the impact if indeed such a substitution were to occur. One potential outcome would be to allow the BBC to eschew costly traditional distribution altogether in favour of online-only distribution – although the costs of online would have to reduce even more drastically than they have to date if the entirety of the BBC’s current output were to be delivered via IP cost effectively when compared to broadcast. Moreover, an IP-only route to market surfaces a number of acute challenges around the BBC’s ability to maintain prominence, editorial control and brand attribution – all key to ensuring it complies with its Charter objectives. A shift in favour of an IP-only route would also compromise the undertaking in the Agreement to put the BBC’s principal services on DTT, although this could be addressed through a change in Government policy.
- 5.6 It is possible, however, for this transition to be managed in stages, with some BBC services migrating exclusively online before others. Part of this analysis must include determining whether the BBC itself may, through its distribution choices, condition the rate of change in relation to traditional versus online consumption outcomes – for instance, by promoting future iterations of the iPlayer, transitioning certain channel services such as BBC Three to IP-only delivery, extending the availability of content in non-linear windows, and investing in new distribution methods such as digital storage for individual licence-fee payers. Were it to do so, the BBC would have to consider the impact on all its users – not just on those prepared to embrace an all-IP world but on those who are unwilling or – for instance for reasons of financial or other disability – unable.
- 5.7 A key question for the purposes of the current report is whether the BBC is in a position to take account of different distribution challenges in the future, and whether its governance and processes are informed by accurate market intelligence gathering, analysis and best practice with regard to third-party suppliers.
- 5.8 We look at this first in the context of how the BBC develops and reviews its assumptions about the distribution marketplace. We then consider its tracking of consumer behavioural trends, including how licence-fee payer expectations may change over time as technology develops and different consumption patterns emerge.

Assumptions on market developments – how are they established and reviewed?

- 5.9 The BBC routinely reviews key external platform, enablement and consumption forecasts from a range of independent sources, and these are supplemented with its own data (particularly related to consumption and viewing patterns). The BBC has itself identified the need for a pan-BBC strategy in relation to tracking distribution trends, which may be confirmed following completion of the Strategy Review (currently ongoing). In the interim, the BBC tracks key developments around platform growth, technological enablement through a range of data collection and interpretation means, including its own Mobile Platform tracking and detailed device-by-device reporting for those delivery methods where the BBC is able to collect the data itself.
- 5.10 More generally, there is no specific “house view” available to all parts of the BBC around key market developments and forecasts (although a standard set of assumptions were developed to inform the DQF document).
- 5.11 In particular, the BBC has yet to confirm a common view on the sustainability of the linear broadcast model in response to evolving IP technology. We heard a range of views in the course of our interviews for this report, including from those who expect the linear TV share to decline rapidly in the medium

term as a result of the combination of technological enablement and consumer behaviour. This school of thought contends that a slavish commitment to a traditional “channels” approach to delivering the BBC services will soon be outdated. Other views expressed to us include a vision of the future where core traditional PSB channels continue to have salience well into the future and in particular that older demographics are unlikely to embrace a fully IP environment willingly. In our view, it is not necessary to choose between these relative extremes, but rather to ensure that developments in the market are tracked with sufficient granularity and robustness such that the BBC operates at the very least in line with market changes (and arguably, given its public-service role and characteristics, slightly ahead of the market).

- 5.12 Both TDA and Future Media routinely collect, interpret and apply data in their distribution considerations. In aiming to ensure that a pan-BBC approach to tracking market developments is achieved, the empowerment of a BBC board or body to consider strategic issues related to distribution holistically will be useful. This is likely to provide a forum for discussions and considerations around both traditional and online distribution, based on common foundations.

Tracking of consumer behavioural trends

- 5.13 The BBC has broadly followed and in some cases led the shift among consumers toward greater engagement with non-linear content, particularly on devices other than the PC. The fastest growing segments for online consumption of BBC content in recent periods have been smartphones and tablets, while the share taken by PCs has fallen as a proportion of total consumption. Trailing 12-month data justifies in particular the BBC’s extensive availability of content via tablets, which have proved a popular method of accessing both bbc.co.uk services (news, weather and sport) and content supplied via the iPlayer. The BBC tracks in a detailed fashion the delivery of content by device (down to the granular level of types of devices within categories). This informs, for example, the road map for service and functionality enhancements to the online offering, in direct response to tracking of consumer behaviour and indicated preferences.
- 5.14 However, the BBC has identified some shortcomings in relation to data – in particular the lack of individual consumer profiling matched to viewing/usage of BBC content and the incompatibility and incompleteness of some data provided by managed TV platforms such as Virgin and Sky. Despite the lack of consumer-specific data, the BBC tracks consumer behaviour via its own iStats system, which, when combined with BARB, allows it to derive some detailed information on programme-by-programme and device-by-device consumption and viewing patterns. While imperfect, the BBC also matches demographic and other category data derived from linear TV viewing to the consumption of non-linear content (making assumptions about the online audience based on a read-across from linear patterns). The BBC also addresses the issue of multiple viewers of a requested stream, where hard data is lacking, by making some informed assumptions about viewing sessions and the number of viewers varying by platform.⁶¹ Subject to privacy issues, the BBC is aiming to improve its knowledge of individual licence-fee payers via supporting the recently announced upgrade to BARB’s collection of engagement data after the linear window and through its own investments in data collection to underpin potential future development of a personalised iPlayer. The degree and extent to which this

⁶¹ We concur that multiple viewing of online streams is a fraught area owing to data imperfections. Based on its own consumer research, the BBC estimates 1.2 people view iPlayer content delivered to the PC per viewing session, rising to 1.46 on consoles and TVs. Mobile viewing is assumed to be solitary. While far from scientific, these assumptions appear commonsensical, and are a first step toward establishing the reach and licence-fee payer value of discrete BBC content delivered via various online means.

will be undertaken is subject to the outcome of the current Strategy Review, identification of incremental funding requirements and any necessary approvals from the Trust.

- 5.15 In general, the BBC will be able to pursue a dual strategy around data capture – through industry-wide initiatives and through its own improved data collection. This may well be accelerated if the BBC pursues a strategy of individualising BBC content and user experience, via the “myBBC” project (greater personalisation of the iPlayer proposition). In any event, its work in collaboration with other PSBs around common standards for tagging and metadata layering may promote the generation and capture of significant, meaningful data to guide future distribution (and indeed other) strategies. Notably, this level of data capture is likely to inform a number of decisions around, for example, content genres and content rights windows. Many of these data enhancement developments remain in planning stages and are subject to the wider Strategy Review being undertaken.

New technology assessments

- 5.16 Informed by market data, external surveys and its own consumer research, the BBC also engages with technology partners and tracks technical developments market wide via a number of points of engagement involving BBC staff across the Corporation, particularly in Technology and Future Media. This includes the range of relationships which the BBC has entered into, for example, with technology partner Atos and with a range of suppliers and distribution partners such as Akamai, Microsoft, Arqiva, BSkyB, Virgin, Google and Apple. BBC has identified the need to improve the degree to which such assessments of new or evolving technology arising in particular from engagement with third parties are shared across the BBC. This extends to the detailed work that is done internally at BBC Technology and elsewhere at the BBC.
- 5.17 One specific outcome in this context is the potential creation of a pan-BBC “technology architecture” to ensure that technology is standardised and best practice adopted across the Corporation. This includes establishing “a common view of the BBC’s technology landscape” – whether in regard to IP delivery standards or other elements of distribution.
- 5.18 Chief among the challenges facing the BBC will be the escalating costs of providing both the underlying linear services (which may become more expensive depending on how the BBC elects to re-position its HD services in particular) and the volume-driven expenditure on online distribution, which will rise even if unit costs decline further in line with trends in recent years. Greater standardisation of video delivery (perhaps around an emerging HTML 5 standard), the emergence of common approaches to metadata and consumer data collection, and improvements in IP networks may combine to reduce the BBC’s exposure to cost burdens associated with online distribution.

Identification of enabling partnerships to ensure future preparedness

- 5.19 The BBC has already entered into a number of distribution partnerships, now relatively systematised through the syndication policy and – in relation to connected devices – via the TAL and the certification process. The BBC also maintains development and technology partnerships with a range of device manufacturers, including companies making TV sets, tablets and smartphones. On this basis, the BBC remains in relatively regular touch with a range of partners including major suppliers such as Arqiva and Atos for traditional distribution, technology partners such as Akamai, Microsoft and Adobe in the context of online and device makers such as LG, Sony, Panasonic and Apple.

- 5.20 The BBC has also established a working group with other PSB broadcasters to explore the creation of a common standard for metadata tagging of non-linear content.
- 5.21 In addition, it has also made available the TAL on an “open source” basis, to encourage adoption across the online distribution chain, including by other broadcasters.
- 5.22 The BBC has already identified the need to deepen its engagement with external technology partners (and others), particularly through the creation of a pan-BBC Business Development function that would range across the public service, BBC Worldwide and the World Service. The aim would be to explore potential ways of commercialising the BBC’s own investments in technology and to review opportunities “for supplementing the licence fee with third-party funding” particularly for the BBC’s online platform. In this context, working with external partners is an explicit route open to the BBC to maximise revenue and minimise costs.

Medium-term distribution issues

- 5.23 Against the broad landscape issues discussed above (notably the trends in relation to IP delivery, the robustness of the broadcast model, changes to licence-fee payer expectations around devices and content availability), the BBC is also likely to have to contend with a number of very specific challenges in the medium term.
- 5.24 A chief question remains the likely trends around HD, and whether the BBC will need to further strengthen its HD channels line-up and if so at what cost. The BBC has already proposed changes to its HD line-up, announcing it will launch a fuller suite of TV channels on all platforms by early 2014. The BBC is also indicating that it will retreat from 3D (the limited content in this format had been broadcast on the now-defunct BBC HD channel). The HD strategy is necessarily linked to the BBC’s wider goal of ensuring the viability of free-to-use services market wide and promoting platform competition, particularly as a countervailing influence on the growth of pay TV gate-keepers.⁶²
- 5.25 In order to be consistent with the all-platform uniformity of services, the key requirement to unlock the HD expansion was to secure enough capacity on DTT to launch the new services. Once this was achieved, via deployment of the spare DTT slot on the BBC’s PSB3 multiplex and through an agreement with Arqiva to take up two slots on the interim 600 MHz capacity awarded to Arqiva in July 2013, distribution via satellite and cable became relatively straightforward, although remains subject to agreeing carriage terms (as we discuss in further detail below).⁶³
- 5.26 It is worth noting that the BBC’s HD strategy will be informed by external factors over which it has little control, including Ofcom’s decisions on the future allocation of spectrum – for instance, the possibility that the interim 600 multiplexes will be withdrawn for deployment by other users and the possible application of spectrum tax, or AIP, to the BBC’s DTT multiplexes.
- 5.27 AIP will not now be applied in the medium term, as Ofcom has proposed waiting until 2020 before instituting the new charging regime. However, the AIP concept remains on the agenda. Ofcom is engaged in fundamental analysis of the likely uses of spectrum in the future and has identified at least two potentially conflicting trends – the growing requirements of mobile operators to secure

⁶² Broadcasters in many markets, including the BBC, have been exploring the possibility of providing content in the Ultra HD standard, although lack of receiving equipment in UK homes suggests any developments here are likely to remain experimental, certainly in the medium term.

⁶³ The BBC is also considering the spectrum requirements for its potential launch of a BBC One +1 channel, announced in October 2013. A final configuration of new HD channels, the +1 channel and regional HD variants for BBC One and BBC Two has yet to be determined, and the precise line-up on DTT and the costs have not been established.

bandwidth to deliver next-generation services and the role of DTT in future in ensuring platform competition and delivering public-service value on behalf of the citizen-consumer. AIP is seen by many at Ofcom as the clearest way of ensuring that spectrum is efficiently used, although the regulator concedes that public-service objectives are an important issue that may require *ex ante* treatment.⁶⁴ The BBC has campaigned against AIP (for itself and other broadcasters), arguing in part that the spectrum efficiency meant to be promoted by application of the tax is achieved already via market signalling (the price of commercial DTT slots) and that in any event the obligation of universality imposed on PSBs (and the BBC's Agreement undertaking to put its "principal" services on DTT) reduces their ability to operate independently of reach requirements.

- 5.28 Well before the issue of AIP becomes germane, the BBC is also likely to have to contend with a potential reduction in the amount of spectrum available for the use of broadcasters (e.g. in favour of mobile broadband). While the BBC itself is unlikely in any medium term framework to "lose" its two multiplexes (or their equivalent), there is the prospect that interim multiplexes at the 600 MHz band may revert to Ofcom for allocation to other users and that spectrum currently being used by commercial broadcasters is similarly re-allocated. This could have serious implications for platform competition (by reducing the attractiveness of the free-to-air DTT platform) and might lead to a favouring of pay-TV platforms over free, with implications for both consumer benefit and for public-service outcomes. The BBC has made it clear in the interviews conducted for this report that it is well aware of these platform impairment challenges and the potential impact on the availability of PSB content free at the point of use.

Ensuring that public purposes are met in future

- 5.29 The BBC's undertakings on universality, quality, reach, value and licence-fee expectations will remain foundational for the foreseeable future, thereby conditioning some of its distribution choices. While the Corporation sees its role as promoting the availability of its UK services on multiple platforms and in formats preferred by licence-fee payers, free at the point of delivery, it will not be able to abandon its core audience delivery via broadcast networks, which will for some years represent the largest share of viewing and engagement. In particular, the BBC will need to provide its services to those less likely to equip themselves with relevant new technology and network access – for example, poor families and older citizens.
- 5.30 However younger demographics, and in particular the current generation for whom online access and non-linear consumption is already habitual, will also need to be addressed, thereby underlining the need for the BBC to continue to promote content availability on multiple platforms and via improving IP and wireless networks. This was part of the rationale for the launch of the CBeebies app for iOS, Android and Kindle Fire in mid-2013 (a CBBC app is planned for later in 2013 or in 2014).
- 5.31 The BBC may find it must ask fundamental questions about the relationship between universality and cost effectiveness on various fronts over the next few years. For example, should it only broadcast HD

⁶⁴ See, for example, Ofcom's 600 MHz consultation document at: <http://stakeholders.ofcom.org.uk/binaries/consultations/uhf-strategy/summary/spectrum-condoc.pdf>, where it concludes: "The DTT platform currently performs a very important public policy role in providing universal low cost access to Public Service Broadcasting (PSB) content, whilst also providing a wider consumer choice of channels, receiver equipment and platforms [...]. The amount of broadcast capacity required by the DTT platform to deliver benefits to citizens and consumers can be viewed from:

- *A public policy perspective*: the amount of broadcast capacity needed to deliver the PSB channels;
- *A platform sustainability perspective*: the amount of broadcast capacity required to enable the DTT platform to remain sufficiently attractive to viewers so that it can remain commercially sustainable as a platform and hence a means of providing access to the PSB channels;
- *A consumer choice perspective*: the amount of broadcast capacity required to sustain consumer choice in TV content, platforms and equipment."

to the standards of the lowest common denominator (e.g. if it can supply a limited number of HD streams on DTT, should it limit its HD portfolio similarly on every platform, even where spectrum is available for additional channels on these less bandwidth-constrained platforms)? Put another way, can the BBC (if only temporarily and for reasons of technical delivery and cost) justify having different offerings on different platforms? Certainly it has done so in the past – for example when it launched iPlayer on iOS but not on Android, or indeed for its current HD offering, which is received in fewer than half of all homes.⁶⁵ At least for its core TV services, it has however sought to render equivalent its portfolio on all platforms and this has meant allowing DTT spectrum scarcity to dictate distribution choices. It should be noted that the BBC is obliged under the Agreement to make its “principal” digital services available on DTT.

- 5.32 The BBC is understandably concerned it must not abandon its commitment to free services, nor necessarily enhance the attractiveness of pay-TV propositions by supplying a richer offering of BBC content in homes that are willing to pay a subscription. This would not only erode the viability of the universal licence fee but would also serve to promote the status of pay-TV operators as gate-keepers, potentially reduce platform competition, and generally risk jeopardising the BBC’s control over the terms of its engagement with licence-fee payers. At the same time, the existence of platform charges (to the degree that these remain in place) will mean that any offering on, for example, Sky, would incur additional charges, further adding to the BBC’s distribution expenditure. Outcomes around the balance of free and pay platforms will be materially affected by decisions taken by Government and regulators around the uses of spectrum in future.
- 5.33 In pursuing its objective of cost-effective delivery of its services to all categories of licence-fee payer, the BBC has emphasised the importance of its ability to access platforms and networks and the requirements that its services be prominently displayed. This was relatively straightforward in an era of channels and traditional linear broadcast, where the BBC’s core services were prominently displayed on TV platforms. It will become far more difficult to sustain prominence as viewing shares fragment and the non-linear market grows in size.
- 5.34 For example, the launch of a new-generation Google TV, based on advanced forms of search and navigation outside the standard EPG, or greater traction for Apple TV and the growth in A/V delivery on a paid-for basis, may pose significant problems for mass-market free-to-air broadcasters. In the case of the BBC, reach can be aggregated across devices and households and there is less reason than for commercial broadcasters to be concerned about whether reach is delivered via scheduled broadcast or via on demand.⁶⁶ However, there is likely to be a debilitating impact on the BBC’s overall share (and thus a reduction in its salience as a broadcaster funded by the licence fee) in the event that consumers cannot easily find BBC content on new platforms.
- 5.35 In all its consideration of future distribution challenges, the BBC is aware of the constraints it faces compared to other (commercial broadcasters). Put simply, whereas ITV, Channel 4 and others are able to engage on a fully commercial basis, offering hybrid free and pay consumer propositions and trading supply of (non-core) channels and services in exchange for access, prominence and even revenue, the

⁶⁵ We estimate that there are roughly 10m households in the UK with HD on the main set in the home, including roughly 4.5m which pay a subscription to Sky for HD. It should be noted that the BBC has often been ahead of consumer take-up, for example through the early years of digital switch over period, when it provided digital channels even before the majority of homes were equipped to receive them.

⁶⁶ Commercial broadcasters earn a premium from advertisers when they deliver mass-market “live” audiences, and reductions in their linear viewing share have serious implications for core revenue generation, given that non-linear income will not necessarily compensate.

BBC is obliged to consider its universality undertakings across the whole of its services and cannot easily “trade” as commercial broadcasters do.

- 5.36 The BBC is supporting multiple campaigns in the public-policy arena to ensure it can maintain relevance in the future. These include supporting the extension of “appropriate prominence” protection to non-linear TV platforms, combating the emergence of services that re-transmit free TV channels without compensation and insert third-party advertising, and generally articulating a case for the BBC to be carried for free on all platforms (at a 0 rate) and to be protected by net neutrality provisions ensuring that its online services are not subjected to traffic management or other network operator restrictions. The BBC is also actively promoting the case for ensuring that adequate spectrum is reserved for broadcasting in future. In some instances, the Government is moving in the directions favoured by the BBC – for instance in calling on market participants to agree to reduce access charges to zero and through the consultation on extending prominence protection to non-traditional platforms.⁶⁷
- 5.37 [X]
- 5.38 [X]
- 5.39 [X]
- 5.40 [X]. More generally, the BBC is probably obliged to make its case via public policy in the main, as it – unlike commercial broadcasters – is unable to enter into purely commercial negotiations (trading content supply for money, prominence or both and pursuing a hybrid free/pay strategy).
- 5.41 In this context of the BBC’s leverage with regard to third-party platforms, the BBC’s position may be partly protected on emerging platforms such as connected TVs owing to its role as a “hygiene factor” without which few platforms want to launch a consumer service. At the same time, the BBC benefits from its strong linear market share, which continues to be a reliable predictor of share in the non-linear environment. These advantages may not remain in place in the future, however. As non-linear viewing opportunities proliferate, and as a new models of A/V distribution (rooted, for example, in social recommendation or via deeper and richer algorithms to determine prominence and “findability” of content), the BBC may find it struggles to maintain current levels of audience engagement. The Government’s consultation on securing prominence for PSB content on non-traditional platforms may mitigate – at least to a degree – these risks.

Concluding remarks: Fit for future purpose

- 5.42 The BBC has considered its structure and strategy in detail as a result of the DQF process, and this has led to a significant enhancement in the way the Corporation reviews distribution challenges. Moreover, the creation of the syndication policy and the certification process, when coupled with a streamlined “One BBC, Ten Products, Four Screens” strategy has provided important focus internally and in dealings with third parties.
- 5.43 The flat licence-fee settlement has further focussed attention on the distribution costs associated with both the current requirements and likely future developments across technology and licence-fee payer behaviour. For example, the BBC is pursuing a number of routes to either cap or render more

⁶⁷ The Department for Culture, Media and Sport reiterated its preference for zero rate platform charges for PSBs in the policy paper “*Connectivity, content and consumers: Britain’s digital platform for growth*”, July 2013. Therein, the Government confirmed it would launch a consultation on PSB prominence on non-traditional platforms.

transparent the distribution burden it faces, including pursuing a zero-rate strategy for pay-TV platform distribution (effectively looking to reduce its payments to Sky or even to seek payment flows in the opposite direction) and securing ever-lower unit costs for the delivery of its content online.

- 5.44 For traditional broadcast, the BBC has established a road map for expansion of its HD services and identified cost savings from further spectrum efficiency (including deploying its fifth slot on the PSB3 multiplex); further savings may arise from lower platform access charges and more radical measures such as reducing the number of regional opt-outs on digital satellite or even migrating some services to IP only at some point in the future. There may also be savings arising from the review of investments in platforms (Freeview, Freesat, YouView), subject to the BBC's commitments on promoting DTT and free-to-view services. In fundamental ways, the BBC's ability to maintain the relevance of free-to-view broadcasting may well be affected by decisions outside its control – in particular, the allocation of spectrum over the medium term and the impact this might have on both the robustness of the Freeview platform and on the sustainability of PSB funding models.
- 5.45 The BBC has established careful monitoring of technology, market developments, and consumer behaviour and is proving adept at marshalling its own and third-party data to inform strategic decisions around distribution. These data points and analysis have not always been shared efficiently and systematically on a pan-BBC basis, and there is an understandable range of views within the BBC about the likely future trends in relation to content distribution and consumption.
- 5.46 Assuming the BBC continues to evolve its strategy in relation to data, governance and technology sharing, the BBC should be in a stronger position going forward to address its distribution challenges in a cost-effective manner. This position could be enhanced by a decision to empower a forum/board below Management Board level to share information and data and to help set strategic direction and focus operational attention around distribution challenges.
- 5.47 Allied to this is a requirement that the BBC ensure all relevant BBC units are generally informed both of technology trends and evolving consumer behaviour (as tracked by the BBC's own and externally generated viewing, usage and consumer data). These should be routinely shared, permitting a common (if constantly updated) view of market trends to emerge.

Recommendations: Fit for future purpose

- The BBC should use its technology partnerships and other commercial engagement to ensure that key industry developments are shared and the implications understood across the BBC. The aim should be to have a common (if constantly reviewed/updated) view on key trends in technology and consumer behaviour.
- Data on consumer behaviour and preferences developed by the BBC and/or sourced externally should be widely disseminated throughout the BBC; such data needs to be upgraded to reflect individual activity rates (subject to privacy considerations) and the BBC should support industry wide enhancements in metrics via official ratings agencies (e.g. such as BARB and RAJAR) - for example, extending these to routinely cover catch-up and on-demand consumption as well as broadcast.

6 Appendix A: Note on methodology and key interviews

In order to complete our work, we relied on two broad data and information sources at the BBC – internal documentation related to distribution strategy and execution and a range of interviews with senior management. We also conducted confidential interviews with a number of third parties, including distribution partners and the management of relevant BBC joint ventures.

The internal documents that we reviewed included: a breakdown of expenditure by category, across traditional and online distribution; reports of staffing levels and functions (full-time equivalents); detailed organisational charts reflecting lines of reporting and accountability; board papers created by management of various operational units at the BBC; market data produced by the BBC; Finance Committee documentation relating to the approval of distribution expenditure; and strategy documents generated as a part of the PQF/DQF process and related strategy documentation prepared subsequently.

We also received detailed information about key contracts between the BBC and external suppliers, including providers of network access, managed transmission services, content delivery networks, streaming services, play-out and platform access services. Both the nature of the contracts and the process by which they were secured (e.g. often via competitive tendering) are explored in the relevant sections of this report. We also reviewed certain distribution categories in greater detail to inform a number of brief case examples included in our analysis. For the avoidance of doubt, we were provided with management-annotated details of the external contracts; in no case did the BBC share confidential information in contracts where such disclosure would be prohibited under the relevant contract terms.

We also reviewed third-party data, including publicly available information (e.g. annual reports, market forecasts, corporate website material) and bespoke data provided by interviewees from outside the BBC. In these interviews with third parties, we undertook to keep certain data and information confidential, and where we have used the outputs of these interviews and data collection (for example in our benchmarking of the BBC's distribution expenditure against commercial cohorts) we have agreed in many cases to redact specific data.

Finally, we had recourse to previous reports for the BBC Trust, other relevant Trust documentation, and studies and reports from Ofcom, and the DCMS policy paper ("Connectivity, Content and Consumers: Britain's digital platform for growth"), published in July 2013.

In relevant instances, we have used our in-house data and forecasts, particularly to inform certain market sizing and consumer activity in relation to the consumption of audio-visual content on a non-linear basis in the future.

A list of the key people interviewed at the BBC for this report is below. In the course of preparing our analysis, we also spoke to senior executives (on a confidential basis) at Arqiva, BSkyB, Channel 4, Channel 5, Freesat, Freeview, ITV, Virgin Media, YouView and Sony.

BBC department	Interviewees
Future Media	Tristram Biggs, Business Development, TV partnerships Richard Cooper, Controller, Digital Distribution Daniel Danker, General Manager, On Demand Holly Goodier, Director, Marketing & Audiences Matthew Postgate, Controller, BBC Research & Development Jane Weedon, Controller, Business Development
Distribution	Tom Everest, Head of Transmission & Operations

	Garazi Goia, Head of Commercial Management Alix Pryde, Director, BBC Distribution Neil Walker, Senior Commercial Manager, Distribution
Television	Bal Samra, Commercial Director Simon Smith, Head of TV Operations
Strategy & Policy	Kieran Clifton, Controller, Future Media & Technology Strategy James Heath, Head of Public Policy James Jackson, Head of Distribution Strategy James Purnell, Director, Strategy & Digital Catherine Smadja, Head of Special Projects John Tate, Director of Policy & Strategy
Audience Research	Carmen Aitkin, Head of Audience Measurement Alison Button, Research Manager BBC iPlayer Helen Moor, Research Projects Manager

7 Appendix B: Key sources consulted

- “An Agreement Between Her Majesty’s Secretary of State for Culture, Media and Sport and the British Broadcasting Corporation”, 2006
- Arqiva reference letters (various)
- BBC Annual Reports, 2009-2013
- BBC Certification for iPlayer and TV Application Layer
- BBC Audience Information, 2011-2013
- iStats updates, BBC internal data (various)
- BBC, “Syndication of BBC On-Demand Content”, 2012
- BBC Trust, “BBC on-demand proposals: Public Value Test”, 2007
- Ofcom, “BBC new on-demand proposals – Market Impact Assessment”, Ofcom, 2007
- Ofcom, “Securing Long-term benefits from scarce spectrum resources”, 2012
- Various BBC Trust decisions (non-service licences, approvals)
- BBC Trust, “Delivering Quality First”, 2011
- BBC Trust, “Putting Quality First”, 2009
- Deloitte “The BBC’s Efficient and Effective use of Spectrum”, 2007
- NAO, “Financial management at the BBC”, 2012
- DCMS, “Connectivity, content and consumers: Britain’s digital platform for growth”, July, 2013
- Annual reports (Arqiva, Channel 4, ITV, Sky)
- In-house BBC documents, reports and minutes, including:
 - DQF process documents
 - OTG budgetary process
 - ODG monthly reports
 - Distribution options for BBC Alba in Scotland, 2010
 - Presentation on Nations HD, 2012
 - Distribution DQF Update and Strategic Outlook, 2012
 - Application of Sky rate card to BBC services, 2012
 - Access and prominence, Executive Board update, 2012
 - Distribution objectives, 2013
 - Finance Committee investment template and guidelines
 - Internal Report, Technology
- Video CDN Data: Pricing, Contract, Volume and Market Sizing Trends, CDNpricing.com, 2012
- Third-party data from surveys and market research including BARB, RAJAR, Comscore, Ofcom

8 Appendix C: DTT Multiplex map

Multiplex	Operator	Channels Carried	Broadcast hours
PSB 1	BBC	BBC 1 BBC 2 BBC 3 BBC 4 CBBC CBeebies BBC News BBC Parliament 301 (red button) 11 BBC radio streams	24hr 24hr 1900-0530 1900-0530 0530-1900 0530-1900 24hr 24hr 24hr 24hr
PSB 2	Digital 3&4 Ltd	ITV ITV +1 ITV 2 Channel 4 Channel 4+1 More4 E4 Film 4 Channel 5	24hr 24hr 24hr 24hr 24hr 24hr 24hr 24hr 24hr
PSB 3	BBC	BBC 1 HD BBC 2 HD ITV HD Channel 4 HD	24hr 24hr 24hr 24hr
COM 4	SDN	ITV3 QVC GOLD Bid TV Drama Home ITV 2+1 5* 5USA Quest The Zone Channel 5+1 Market Place Jewellery channel CITV xxXpanded TV Television X True Entertainment 3 Radio streams 6 IPTV channels	24hr 24hr Times vary (Top-up TV) 24hr 0800-0500 Times vary (Top-up TV) 24hr 0600-0000 0600-0400 24hr 1800-0600 0400-0100 0700-1100 0600-0000 0600-1800 0000-0600 0000-0400 0600-0300 24hr 24hr (Connect TV)
COM 5	Arqiva	Pick TV Dave Really E4+1 Movie Mix Create & Craft Price Drop Gems TV Challenge Food Network Sky News Community Channel ADULT Smile TV3 ADULT Party ADULT Blue ADULT Babestation2 1 Radio stream	24hr 0700-0300 0800-0400 24hr 24hr 0600-2200 0800-0200 24hr 24hr 24hr 24hr 0200-0800 2200-0500 0000-0700 0400-0500 0500-0600 24hr
Com 6	Arqiva	4Music Yesterday	24hr 24hr

Multiplex	Operator	Channels Carried	Broadcast hours
		VIVA	24hr
		Ideal World	0500-0000
		ITV4	24hr
		QVC Beauty	0800-1300
		Rocks & Co 1	1300-1800
		4Seven	24hr
		Al Jazeera English	24hr
		RT	24hr
		BT Sport 1	24hr
		BT Sport 2	24hr
		ADULT smile TV2	0000-0500
		ADULT Babestation	2300-0445
		9 Radio streams	24hr
		4 IPTV channels	24hr (Connect TV)

Note: Channel list correct as of September 2013.

Source: Digital TV Group (DTG)

9 Appendix D: Glossary

600 MHz	part of the bandwidth or frequency of spectrum that was cleared as a result of the transition from analogue to digital TV
700 MHz	the bandwidth or frequency of spectrum where certain digital TV channels currently reside
AI	Appreciation Index – the BBC’s internal tracking of licence- fee payers’ attitudes toward BBC channels and services
AIP	administrative incentive pricing – a tax being contemplated by Ofcom that would be applied to any gifted capacity, including broadcast capacity, from 2020 to promote spectrum efficiency
AM	amplitude modulation – a method of delivering radio signals to receiving equipment, associated with standard or lower fidelity services
Android	the Google-owned operating system technical standard for applications used on compatible tablets and smartphones
AP	appropriate prominence – the benefit conferred on public-service broadcasters in the UK to be positioned prominently on the user guides of TV platforms
App	an application enabling the delivery of content and services to smartphones and tablets (also used for connected TVs)
Atos	formerly Siemens, the technology company with a long-term omnibus contract to supply a range of technical and consultancy services to the BBC
A/V	audio visual – a short-hand reference to content made up of video and audio combined
BARB	British Audience Research Bureau - the ratings agency that provides standard metrics for tracking viewing of linear TV across age, gender and social groups
BBC Distribution	the department at the BBC that is primarily responsible for the distribution of the BBC’s core TV channels and radio stations
Bit rate	a unit of delivery of content via streaming over fixed and wireless networks (usually described in terms of mega or kilo bits per second (Mps/Kps))
CA	conditional access – a system describing the encryption of content that is only viewable if unencrypted, normally via a viewing card, upon payment of a subscription
Cable	the digital cable network operated in the UK as Virgin, delivering broadband, telephony and television via a fixed-line network of fibre optic (or coaxial) cable
Cable head-end	the point where content distributed over the air (e.g. via satellite) can be received and then re-distributed over cable to subscribing households
CATAL	the Certification process (including self-testing) by which connected TV platforms ensure that their platforms can work with the BBC’s Television Application Layer standard for the delivery of iPlayer, BBC News and BBC Sport
Catch-up TV	the availability of content in the seven (BBC) or 30 (other broadcasters) days from initial transmission, via multiple devices
CDN	content delivery network – a large distributed system of services deployed in multiple data centres across the internet, increasing the efficiency of delivery of files to end users and reducing transport costs
CCM	centralised coding and multiplexing, a service to encode, compress and deliver A/V channels to multiple platforms, including satellite and DTT; the BBC uses infrastructure developed by Atos as part of the framework technology agreement

COM 4,5,6	the commercial multiplexes on the DTT platform operated by Arqiva or SDN (ITV); these multiplexes distribute commercial broadcast services, including some of the extension channels of the commercial PSBs
Comscore	the ratings agency tracking visits and duration for online destinations, including for VOD platforms such as the iPlayer
Connected TVs	a TV equipped with a tuner (DTT or DSAT) that is also connectable to the internet via a fixed or wireless link with the IP router in the home
Connected Red Button	the BBC's strategy of offering via connected devices standardised access with recognisable User Interface and functionality to three principal BBC products – iPlayer, BBC Sport and BBC News
Content Connect	operated by BT, it provides multicast delivery of channels and other services to managed TV platforms such as YouView
CPE	Consumer Premises Equipment – the equipment either purchased by consumers (or provided by platform operators) permitting TV and other content to be received in households (e.g. TV sets, set-top boxes, personal computers)
DAB	Digital Audio Broadcasting – the digital radio standard in the UK, providing more capacity and higher quality than possible with analogue radio
Digital 3&4	the operator of PSB2, the DTT multiplex gifted to ITV and Channel 4
DMOL	DTT Multiplex Operators Limited, the group responsible for the technical operation of the Freeview platform, including the electronic programme guide, made up of the holders of DTT multiplex operator licences, the BBC, Digital 3 and 4 (owned by ITV and Channel 4), SDN (owned by ITV) and Arqiva; DMOL has been merged with Digital UK
Downloading	the delivery over IP of content to the memory of a computer or other device for consumption at the user's discretion (sometimes subject to time restrictions)
DQF	Delivering Quality First – the current strategy framework governing the BBC's activities, including its meeting of financial obligations following the frozen licence-fee settlement
DSAT	Digital Satellite – the current platform for the delivery of TV channels and other services via satellite; the two main operators are Sky Digital and Freesat
DSO	Digital Switch-over – the programme of transitioning the UK from analogue to digital; the switch over was completed in late 2012
DTT	Digital Terrestrial TV – the standard format for over-the-air terrestrial broadcast TV in the UK, branded as Freeview
DUK	Digital UK – the umbrella organisation responsible for delivering the DSO programme and overseeing elements of the operation of the Freeview platform
DVB-T1, DVB-T2	Digital Video Broadcasting – the standards used for the delivery of DTT, with T1 the initial digital standard and T2 a more efficient upgrade which (along with improvements in other standards) permits the broadcast of HD channels
Edge caching	the delivery of content to segments of the internet closest to the centres of population likely to want to access it
Encoding	turning analogue (e.g. film or video tape) into digital files for delivery over IP
EPG	Electronic Programme Guide – the TV guides incorporated into TV platforms permitting users to navigate around the schedule and to access ancillary services such as recording, interactive, VOD, etc.
Fair Trading	the obligation placed on the BBC (and other public sector bodies) to operate on a fair and transparent basis without undue negative impact on commercial parties
Flash	a standard for content delivery via IP specifically for A/V (owned by Adobe)

FM – frequency modulation	a method of delivering radio signals to receiving equipment, associated with high definition or higher fidelity services, located in the Very High Frequency (30MHz-300Mhz) bandwidth
FM – Future Media	a division of the BBC operationally responsible for the delivery of BBC content and services by means other than traditional linear broadcast
Freeview	the brand name for the free-to-air terrestrial platform in the UK; owned by the BBC, ITV, Channel 4, Arqiva and BSkyB
Freesat	the brand name for the free-to-air satellite platform in the UK; owned by the BBC and ITV; also the name for the FTA satellite platform operated by BSkyB (known as Freesat from Sky)
FRND	Fair, Reasonable and Non-Discriminatory – a standard reference in competition law to the requirement to treat suppliers and customers on a fair basis, particularly applicable in cases where a particular company enjoys significant market power
HD	High Definition – generic term for picture quality based on a higher number of pixels conferring better resolution
HLS	HTTP Live Streaming – live on on-demand video delivery protocol implemented by Apple, used as standard across all Apple devices to deliver video over IP
HTML 5	the latest version of the mark-up language for creating internet pages and embedding a wide range of multimedia services on the World Wide Web
iOS	the Apple-owned operating system used on all Apple tablets and smartphones
IP	Internet Protocol – the foundational standard for the delivery of files over the internet
ISP	Internet Service Provider – the commercial supplier of (usually) broadband services to households and business
iStats	the BBC’s internal data capture system tracking use of the BBC’s content and services
Linear	a term for the “traditional” delivery of content on a scheduled basis, at a time of the scheduler’s choosing
LW	Long Wave – a radio signal with wide propagation in the Low Frequency (30kHz-300kHz) bandwidth
Metadata	programme and other ancillary information layered alongside a video file or broadcast, used to enhance search capability, rights management
MIA	Market Impact Assessment – a standard review undertaken by Ofcom in cases where the BBC’s plans are considered by the Trust to have potentially large impacts on the wider market; part of a Public Value Test (or PVT)
MPEG-2 /MPEG-4	Motion Picture Experts Group – different standards for the broadcast/delivery of video content, with MPEG-4 associated with high definition
MTS	Managed Transmission Services –provided by broadcast services company Arqiva to broadcasters and other users of DTT and wireless spectrum
Multiplex	a band of spectrum organised to permit multiple channels to be broadcast
Multiplexing	the layering of multiple, encoded signals delivered efficiently over the air (via terrestrial or satellite)
MW	Medium Wave – a radio signal with limited propagation in the Medium Frequency (300kHz-3MHz) bandwidth
Network Access	the regulated services provided by Arqiva (with prices and services levels reviewable as a condition of the merger of two former competitors, NGW and Arqiva)
Non-linear	a term for on-demand or time-shifted viewing of material originally broadcast on scheduled services (e.g. covers all catch-up TV, PVR use, VOD, podcasts, etc.)

ODG	Online Direction Group – a body with representation from across the BBC, where broad issues including those around online products, distribution and technology are considered
OTG	Online Technology Group – the main operational unit responsible for the delivery of the BBC’s on-demand services, including bbc.co.uk and the iPlayer
OTT	Over the Top – the deliver via IP to a TV or set-top box via the internet rather than through the broadcast or closed network of a platform provider
PC	personal computer – any computer used in the home; now can be extended to include laptops
PCC	Platform Contribution Charges – the element of BSkyB’s charges to channels on its platform that is represented as a share of the costs of developing the Sky Digital Platform
Play-out	the aggregation of content into channels (and variants) for distribution to TV platforms
POD	Programmes on Demand – the department of Future Media at the BBC responsible for the iPlayer
PQF	Putting Quality First – the original blueprint for the BBC’s long-range strategic plan, which was finalised as “Delivering Quality First” in 2011
PSB	Public Service Broadcasting – the formal term applied to holders of broadcast licences (or, in the case of the BBC, subject to Charter terms) as providers of public-service broadcasting; in return for various commitments on reach and content, the PSBs are gifted DTT capacity and secure a prominent position in TV listings and on EPGs; the PSBs are: all eight BBC TV channels plus BBC Alba, S4C, and the main channels of ITV, Channel 4 and Channel 5 (i.e. not including their portfolio channels)
PSB 1, 2, 3	Public Service Broadcasting multiplex – the three multiplexes that are held by PSB licensees (the BBC with two and ITV and Channel 4 with one shared between them); Channel 5 has “sitting tenant” status on COM 4, one of the commercial multiplexes
PS3	Play Station 3 – the brand name for the games console offered by Sony
PVR	Personal Video Recorder – an integrated recorder permitting users to record programmes off air for viewing at a later time of their choosing
PVT	Public Value Test – the test used by the BBC Trust to review any investment or new initiative of the BBC that risks having a significant and potentially adverse commercial impact
QAM	Quadrature Amplitude Modulation – a form of modulation that permits TV channels to be distributed over the air via digital encoding
RAJAR	Radio Joint Audience Research, the ratings agency that gathers and publishes data on radio listening in the UK
Red Bee	a former operation of the BBC providing a range of broadcast services, including encoding/transcoding and play out
Red Button	the interactive services available on TV platforms, which include the BBC’s services
Regionalisation	the service provided by platform operators under which the correct regional variant of a channel appears at the same channel number in all parts of the country
RQV	Reach, Quality, Value – the BBC’s key measurements to ensure it is addressing licence- fee payer needs and expectations
SD	Standard Definition – a short hand for traditional picture quality on standard TV sets
SDN	the holder of COM 4, one of the commercial multiplexes that make up the DTT platform in the UK; owned by ITV plc
Smartphones	any mobile phone capable of receiving services (including video) over IP via wireless or WiFi networks
Smart TV	TV set with integrated internet connectivity, e.g. Panasonic Viera, Sony Bravia

STB	Set-top Box – the operating system that runs pay-TV platforms, normally connected to a TV set with its own tuner
Streaming	the delivery of files in digital format over the internet in real time
Syndication policy	the BBC's in-house framework for the provision of its services to third-party distributors
Tablet	a device connectable to the internet (either via 3G or WiFi) that constitutes a mid-point between laptops and smartphones
TAL	Television Application Layer – the BBC's technology layer that permits it to standardise over-the-top delivery of content to multiple television set models and other devices with limited re-purposing
TDA	Technology, Distribution and Archive – a grouping of departments of the BBC that includes BBC Distribution, which oversees linear broadcast of TV and radio services
Time-shifting	recording programmes off air for viewing at a later time
TiVo	the IP-enabled interactive TV platform offered to customers of Virgin Media
TPS	Technical Platform Services – the guidelines that govern the supply by BSkyB of platform and access services on the Sky Digital platform; the TPS regime is administered by Ofcom
Transcoding	the conversion of one set of digital files into another standard digital file
Transponder	a segment of a satellite in geo-static orbit that permits a number of channels to be grouped and broadcast
VOD	video on demand – the delivery of content on a non-scheduled basis to users at a time and via a device of their choosing
Uplinking	the process of sending A/V content to the satellite prior to broadcast to household dishes
YouView	an IP-enabled DTT hybrid set-top box featuring both linear and non-linear (catch-up) TV content; owned by the BBC, ITV, Channel 4, Channel 5, Arqiva, BT and TalkTalk
Xbox	the brand name for the games console developed by Microsoft



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