In 2015 public service broadcasters (PSBs) are operating in a media landscape in which the increased convergence of the internet and television has blurred the distinctions between broadcast and on-demand TV. In this environment, people can switch easily between live/linear and on-demand viewing within the same interface and access television content through a range of online and internet-connected services. In the current UK market there are a number of suppliers providing video-on-demand (VOD) services operating with different financial models (Table 1). These services are typically offered across a range of platforms, including PCs and laptops, tablets, smart phones, games consoles, set-top boxes and connected televisions. With increased uptake of connected televisions, tablets, smart phones and superfast broadband, on-demand services are set to become a dominant means for accessing television.

<table>
<thead>
<tr>
<th>Free</th>
<th>Part of a television subscription package</th>
<th>Direct subscription</th>
<th>Pay-per-view</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBC iPlayer</td>
<td>Sky Go</td>
<td>Netflix</td>
<td>iTunes</td>
</tr>
<tr>
<td>ITV Player</td>
<td>Virgin TV Anywhere</td>
<td>Amazon Prime</td>
<td>Google Play</td>
</tr>
<tr>
<td>All 4</td>
<td></td>
<td>Now TV</td>
<td>Sky Store</td>
</tr>
<tr>
<td>Demand 5</td>
<td></td>
<td></td>
<td>Blinkbox</td>
</tr>
<tr>
<td>UKTV Play</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 1: Based on top online VOD services listed in Decipher mediабug – Wave 4 report on claimed use of selected online VOD services in the UK for 2013-14.

Is there a role for public service broadcasting (PSB) in an on-demand world?

There is a strong argument that as traditional broadcast and internet services merge the case for PSB becomes stronger. Increased choice and fragmentation has enabled niche services to emerge that serve the needs of specific audiences. However, there is little evidence to suggest that the needs of all audiences will be served in an entirely commercial context. If we look at the US market the development of new online VOD television services, such as Netflix, has been focused on those audience demographics that are most able to pay (educated, urban, middle-class, 18-49). In a fully commercial media landscape, economically disadvantaged audiences are under-served because they are less able to pay for services and less attractive to advertisers. By providing free-to-air content that is not determined by ability to pay or attractiveness to advertisers, PSBs ensure that television serves all of the UK public with high quality programming that entertains, educates and informs.

The UK public increasingly values PSB, despite the growth of media providers and services. As viewers have greater choice over how and where to access audiovisual content, questions of trust become more important. The UK’s PSBs retain high levels of trust, in part because they are mandated by regulation to serve the public’s needs over other interests. Furthermore, research indicates
that rather than broadening people’s diet of opinions, ideas and debate about society, politics and culture, the internet tends to limit that diet by acting as an ‘echo chamber’ where individuals find their ideas supported and reinforced. In our highly mediated society, PSBs can instead provide media spaces that are independent from partisan commercial or political interests and encourage encounters with a broad range of ideas, opinions and cultures that are vital for a healthy society and democracy.

PSB and the television industry

PSB has often been criticized for restricting market competition. However, the US case demonstrates that deregulated commercial media markets tend towards conglomeration, and there is no evidence to suggest that the internet changes this. New large global corporations have emerged (such as Google, Apple and Amazon) that increasingly control the flow of global digital content and information and seek to limit market competition. There is little evidence that a fully commercial television landscape in the UK will enable new UK businesses to emerge without regulation to control conglomeration within the market.

The new businesses entering the VOD market in the UK and beyond have invested in original content. However, the business model for global providers, such as Netflix, is to produce programming that can be exploited across a range of international markets. There is also no guarantee, and little evidence, that the new global players within the VOD market will invest in UK production without regulation. The UK PSBs, on the other hand, remain the primary investors in programming for UK audiences. Beyond programming, UK PSBs can also catalyse technological innovations, develop markets and stimulate demand in new areas where business models are unclear, with Channel 4’s and the BBC’s lead in the development of VOD a case in point. This PSB investment maintains a world-leading television industry and significantly contributes to the UK’s creative industry sector.

If there remains a case for PSB, how might it be funded?

1. Subscription: VOD makes it possible to pay for PSB via subscriptions. However, introducing a subscription-based model for all public service broadcasting would damage the fundamental principle that PSB should be universally accessible regardless of ability to pay. The option of funding VOD services (such as BBC iPlayer) through subscription (while retaining a publicly funded linear broadcast service for the BBC) places undue costs on the young who make most use of VOD services for accessing television. Indeed, VOD is a crucial tool in delivering public service outcomes to young people.

2. Advertising: Since the 1980s there has been increasing competition for advertising revenue which has led to concerns that commercial PSBs will be unable to fulfill their public service remits and remain financially viable. However, there are a number of reasons to suggest that funding through advertising remains a viable option.
for PSB. First, television content (broadcast and online) remains attractive to advertisers because of the large audiences that it can reach. Second, advertisers and broadcasters are developing technological solutions to prevent ad-skipping and ad-blocking online. Third, the internet enables greater opportunities for viewer data collection which allows targeted, interactive and personalized advertising around on-demand content. Fourth, new relationships are emerging between advertisers and broadcasters to co-create content for broadcast and online with, for example, the rise of programmes funded wholly by single advertisers (currently referred to in the industry as ‘advertiser-funded programming’).

However, these new developments give rise to a number of concerns. Viewer intolerance of advertising and anxieties about the use of data online might drive them to other media channels for accessing content. In addition, the rise of advertiser-funded programming could erode audience trust in PSBs by undermining (or being perceived to undermine) their creative and editorial integrity. An increase of advertiser-funded programming would also diminish the spaces within which television programmes (both factual and fiction) might engage in useful and necessary critique of the practices and values of advertisers and their clients. In this context, regulation remains important to maintain a balance between ensuring commercial viability and protecting editorial/creative integrity and public service values.

3. Public funding:
The problems with advertiser and subscription funding demonstrate that there remain strong arguments for publicly funded public service broadcasting. Universal public funding ensures that the benefits of television are available to all and that PSBs are accountable directly to the public they serve. Public funding also spreads the costs of PSB and ensures significant value for money and affordability compared with pay-TV services. Public support for the licence fee has increased and the majority of UK households are willing to pay, although concerns have been raised about the criminalisation of non-payers. Nonetheless it is essential that the government fulfill their commitment to close the BBC iPlayer loophole in which people can watch catch-up content on-demand without paying the licence fee. Public funding needs to cover all of the services provided by PSBs given the convergence of broadcast and on-demand television.

Defining PSB in an On-Demand World

1. Scope
The media landscape in which PSBs are now operating is one in which the boundaries between linear broadcasting and online are continuing to diminish. Public service television for the internet era needs to be understood as a component of a larger networked and connected online infrastructure. In order to be able to provide television programming that serves the public, PSBs have to operate across broadcast television and the internet and need to have the flexibility to respond to new technological developments as they emerge.

2. Delivery
a. Data
Online services are driven by data, enabling enhanced understanding of viewer behavior that can shape programme production and that can be sold to advertisers. At present in 2015, sign-in is compulsory for All 4 and ITV Player, but optional for BBC iPlayer and Demand 5. Although sign-in has particular benefits in enabling personalization of services online that could help to deliver public service objectives, Ofcom notes that since 2013 UK adults have become more concerned about giving away data online.\textsuperscript{xiv} Regulation should encourage UK PSBs to offer a gold standard in terms of how they use people's data and how they inform and educate people about the ways in which data is used online.

b. Curation
In an on-demand environment the organization and design of interfaces to ‘curate’ content replaces linear scheduling as the means by which broadcasters shape viewing choices. VOD has the potential to broaden the diversity of content that viewers watch through curation and recommendation. Research suggests that by 2014 42\% of people came to BBC iPlayer without a specific programme in mind.\textsuperscript{xv} While new online providers, such as Netflix, use algorithms to produce recommendations based on existing viewer behavior (encouraging viewing of more of the same), the BBC has developed online curation focused on enhancing serendipitous discovery of a diverse range of content. Curation can also be used to offer increased access to the rich history of PSB and British culture. All 4 offers free access to box sets of archived programmes, while the BBC has integrated iPlayer into its web pages to create journeys from audiovisual content to curated online articles and third party content. In this way, VOD can be used as the starting point to connect viewers to online content within and beyond PSBs in ways that fulfil the public service remit of informing, educating and entertaining. In this sense, PSBs can act as trusted online hubs to connect audiences to a diversity of content with public service value produced by other organisations, such as galleries, libraries, archives and museums (GLAMS). Within this connected environment, PSBs should also be working towards making their online content more shareable and interactive, enabling audiences to freely engage with and spread public service content across the internet. At present, however, the ability for UK PSBs to provide online access to archival content can be limited by copyright legislation.\textsuperscript{xvi}

c. Intermediaries:
Ofcom notes that we are witnessing a shift away from the EPG towards advanced search and recommendation through online interfaces provided by a widening number of firms.\textsuperscript{xvii} As the airwaves are increasingly replaced by the internet as the mode of delivery for television, PSB content may become less available and prominent on interfaces (such as SkyGo, blinkbox, iTunes etc).

Recommendations:
1. In a converged media landscape it makes little sense to have separate regulation for television and the internet. A media neutral definition of public service broadcasting is therefore required to recognize, promote and regulate the range of public service content and functions across media platforms and services (broadcast, on-demand, online etc).
2. There are strong arguments for the continued importance of PSB. Future evaluation of public service television should encompass broadcasters’ use of viewer/user data and curation of content to fulfil public service outcomes. In order to ensure that PSB content remains widely visible and available, due prominence legislation for PSB that currently applies to EPGs should be extended to VOD services.

3. Commercial PSBs should be encouraged to experiment with different advertiser-funding models but regulation is needed to maintain viewer trust and creative and editorial independence.

4. The public interest function of extended collective licensing should be more clearly articulated to enable increased use of public service archival material online.\textsuperscript{xviii}

5. PSBs are becoming trusted hubs online and should partner with organisations, such as GLAMS, to extend access to public service content from a variety of sources.

\textsuperscript{i} This convergence is by no means smooth or complete, yet with the rise of superfast broadband and rollout of connected televisions, TV services are increasingly provided through internet-enabled devices.

\textsuperscript{ii} The Communications Market Report, Ofcom, 7 August 2014, p.145. In October 2015 Freeview Play was launched which provides free access to BBC iPlayer, ITV Player, All 4 and Demand 5 on a television set with the purchase of a Freeview Play TV or set-top recorder.

\textsuperscript{iii} Ofcom’s third review of PSB notes that ‘the purposes and characteristics of PSB are becoming increasingly important to citizens and consumers, and their satisfaction with the extent to which PSB services deliver on their objectives remains high’ (PSB Annual Report 2015, Ofcom, July 2015, p.7).

\textsuperscript{iv} PSB Annual Report 2015, Ofcom, July 2015.

\textsuperscript{v} See for example, Cass R. Sunstein, Republic.com 2.0, Princeton University Press, 2009.

\textsuperscript{vi} Stuart Cunningham and Jon Silver, Screen Distribution and the New King Kongs of the Online World, Palgrave Macmillan, 2013.

\textsuperscript{vii} Patrick Barwise and Robert G. Picard, What If There Were No BBC Television? The Net Impact on UK Viewers’, Reuters Institute, February 2014, http://reutersinstitute.politics.ox.ac.uk/sites/default/files/What%20if%20there%20were%20no%20BBC%20TV_Executive%20Summary.pdf

\textsuperscript{viii} Public Service Broadcasting in the Internet Age: Ofcom’s Third Review of Public Service Broadcasting, Ofcom, 2 July 2015.

\textsuperscript{ix} ibid.

\textsuperscript{x} Although the number of ad-supported channels on YouTube increased by 471% between 2014 and 2015, the average views of a YouTube channel have decreased by 56% (The Long Tail of YouTube, Open Slate, 15 October 2015, https://www.openslatedata.com/news/the-long-tail-of-youtube/). By contrast, the five main PSB channels in the UK still account for over half of all TV viewing (Public Service Broadcasting in the Internet Age, Ofcom, p.7) and the proportion of the UK television industry generated by advertising has remained robust despite competition from online (The Communications Market Report, Ofcom, p.145-6).
For example, Channel 4’s new VOD service, All 4, prevents viewers from ad-skipping and from using ad-blocking software.

British, Bold Creative: The BBC’s submission to the Department for Culture, Media and Sport’s Charter Review public consultation, BBC, October 2015, p.66.

ibid., p.67.


For an overview of the current EU reviews of copyright, see Erwin Verbruggen, Réka Markovich, Krisztina Rozgonyi, D5.4 Strategic Recommendations to Increase the Amount of Audiovisual Materials on Europeana II, EUscreenXL Deliverable (Preprint version),Utrecht, October 2015.

Ofcom, Public Service Broadcasting in the Internet Age.

Extended collective licensing enables collecting societies to license specific kinds of copyright works across an entire sector and was introduced in the UK on 1 October 2014.