The connected TV platform market

An update on our work

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Overview

Smart TVs, set-top boxes and other streaming devices have transformed how UK audiences watch TV. At the end of 2023, an estimated 86% of primary TV sets in use in the UK could be used to watch TV online.[1] These devices contain software platforms (called 'connected TV platforms'), which enable viewers to navigate the TV available to them over the internet and for content providers to distribute content online.

To keep up with audiences' changing habits and expectations, content providers including UK public service broadcasters (PSBs), global streaming services and smaller players have found it critical that viewers can access and discover their apps and internet-delivered channels on connected TV platforms. These content providers reach agreements with connected TV platform operators such as Amazon, Google and Sky to determine what content the platforms carry and promote. Accordingly, these agreements have a growing influence on the TV content that audiences watch.

Ofcom is committed to maintaining a wide range of high-quality content and services, which appeal to a variety of tastes and interests. A well-functioning connected TV platform sector in the UK, allowing for strong competition between content providers for audiences, contributes to this goal. In contrast, if competition in the connected TV platform sector is undermined or distorted, this could significantly diminish the range, quality and pricing of content that UK viewers enjoy.

Ofcom's powers include the ability to impose access-related conditions on firms that have strong negotiating power over others that rely on their infrastructure. Where commercial negotiations fail, Ofcom may set access-related conditions to secure adequate access, interconnection and interoperability on connected TV platforms, in the interests of end-users.

Digital markets can change rapidly: for example, the market for mobile ecosystems appeared competitive over a decade ago, but competitors fell away and Apple iOS and Google Android became a duopoly.[2] We set out in our 2022 Digital Markets Strategy[3] that we would examine the risk that online content gateways, such as connected TV platforms, become an essential route to market in ways that might distort competition.

We have gathered and reviewed a range of evidence relevant to our powers to impose access-related conditions, including from major connected TV platform operators. This evidence has helped us to understand whether competition enables content providers to access a range of platforms, such that viewers can discover a variety of TV content. This update document summarises our preliminary findings, looking particularly at agreements between platform operators and content providers. The document also describes some of the market's features that could, in future, pose risks to competition and strengthen the bargaining power of certain platform operators in ways that might undermine the ability of content providers to access a range of platforms.

What we have found - in brief

Connected TV platforms enable audiences to access TV content from a wide variety of providers, including PSBs like the BBC and ITV, global streaming services such as Disney+ and Netflix and

[1] 3 Reasons/MTM analysis for Ofcom, Future of TV Distribution, 2024.
[2] Competition and Markets Authority, Mobile ecosystems: Market study final report, 2022.
[3] Ofcom, Digital markets in the communications sector, 2022.

smaller content providers. Platforms help audiences find content that they want to see and to discover new content.

Our analysis suggests that, in general, content providers can agree terms with platform operators to secure the availability of their content, such as terms to ensure that audiences can download providers’ apps from platforms’ app stores. Content providers may pay platform operators for this access. While many agreements are based on standard terms, some content providers, typically those with popular content and a large audience base, can negotiate bespoke agreements. We have also seen that connected TV platforms often sell prominence on their user interfaces, making certain content easier to find.

Beyond their agreements with content providers, platforms may give prominence to content services that platform operators themselves own. We found that this ‘self-preferencing’ is widespread among the major connected TV platforms that we looked at. The ability to self-preference may encourage some firms to enter platform markets, making them more competitive. However, it could also make it harder for audiences to access and discover competing content services.

Certain features of the connected TV platform market could raise barriers to entry or expansion for smaller platforms. For example, the market exhibits network effects, where content providers tend to be attracted to the platforms with the largest audiences and audiences are in turn attracted to the platforms with the widest range of content. Moreover, some platform operators are large tech firms that offer a wide range of digital services to huge user bases. Through superior access to user data, these operators may be able to develop connected TV platforms (for example, by integrating personalised features) in ways that could make it challenging for smaller rivals to expand and compete effectively. If the market does grow more concentrated in future, this could adversely affect outcomes for consumers of connected TV platforms and for the range, quality and cost of TV content available to them.

Next steps

The Media Act 2024 (“the Media Act”) has changed Ofcom's responsibilities as the UK's regulator of broadcast and video-on-demand (VoD) services. In particular, it has introduced new rules to ensure PSBs’ players and public service content are available, prominent and easily accessible on a range of connected TV platforms.[4] We published our plans for putting these rules into practice earlier in the year and will shortly launch the first set of our consultations on these matters.[5]

In the light of the analysis set out in this document and our new responsibilities under the Media Act, we have decided as a matter of administrative priority that we will not consider the application of access-related conditions in the connected TV platform market further at this time. Instead, we will prioritise putting the Media Act rules into practice. We will draw on the understanding of the activities of connected TV platforms that we have developed through this work.

We expect connected TV platforms to grow in importance to audiences in coming years as more viewers use them to watch TV content. If we see evidence that the connected TV platform market is not working in the interests of audiences, we will intervene if necessary to address this.

[4] These are defined in the Media Act as television selection services.
[5] Ofcom, Media Act Implementation, 2024.

Introduction

Context and scope

TV viewing habits of UK audiences have changed significantly in recent years. People increasingly watch TV content online, enabled by take-up of faster broadband, connected devices and new platforms and services that offer both vast on-demand catalogues of programming and linear channels delivered over the internet. More and more, content providers such as the BBC, Disney, ITV, UKTV and Warner Bros. Discovery have reached audiences through connected TV platforms on smart TVs, set-top boxes and other streaming devices, while audiences have adopted these platforms to access and discover TV content.

In 2024, we reported to Government on the future of TV distribution, having looked at changes in the distribution and consumption of content and their implications for audiences and networks.[6] The report projected that watching content over the internet, through connected TV and IP platforms, is likely to become the main viewing method for long-form TV viewing in the next few years.

This document examines how well competition between connected TV platforms is working: specifically, whether the current level of competition enables content providers to access a range of platforms, such that viewers can discover a variety of TV content. It looks at the agreements that platform operators reach with content providers, which determine the availability and prominence of content on platforms. It also describes features of the market that could pose future risks to competition and the ability of content providers to access a range of platforms.

We have engaged with stakeholders including connected TV platforms, PSBs, other UK content providers, global content providers and device manufacturers, to understand the value chain in which connected TV platforms operate. We have gathered information from the six largest connected TV platform operators (Amazon, Google, LG, Sky, Samsung and Virgin Media O2) on their businesses,[7] including on their commercial relationships with content providers, licensing arrangements with device manufacturers and how audiences use platforms to discover content.

In this section we set out the background to our work on connected TV platforms. The remaining sections cover the following:

- **Market context:** explains how audiences watch TV online and provides a summary of the market landscape and how platforms operate.
- **Commercial agreements for distribution:** sets out how content providers distribute content on platforms and explores the terms that govern content providers' access to and prominence on platforms.
- **Self-preferencing on connected TV platforms:** discusses why platform operators may promote their own content and services and sets outs illustrative examples of practices we have observed.
- **Features of competition on connected TV platforms:** considers whether there are features of the market that could impact future competition and thus content providers' ability to access platforms.

[6] See Ofcom, Future of TV Distribution and Ofcom, Media Nations 2024.
[7] We requested information from these platform operators under our information-gathering powers in the Communications Act 2003.

Regulatory context

Our duties and powers

Ofcom's principal duty is to further the interests of citizens in relation to communication matters and of consumers in relevant markets, where appropriate by promoting competition. Our other statutory duties include being required to secure in the carrying out of our functions the availability throughout the UK of a wide range of television and radio services which (taken as a whole) are both of high quality and appeal to a variety of tastes and interests.

As a converged regulator Ofcom has powers to set and/or enforce different rules in the sectors for which we are responsible. These include regulatory rules that are specific to the sectors we regulate, as well as more general consumer and competition laws.

Our sectoral powers include those to set access-related conditions under sections 45 and 73 of the Communications Act 2003 ("the Communications Act").[8] These allow Ofcom to set conditions relating to the provision of network access and service interoperability where we consider it is appropriate to do so in order to secure efficiency, sustainable competition, the bringing into operation of very high capacity networks, efficient investment and innovation and the greatest possible benefit for the end users of public electronic communications services.

The Media Act

The regulatory framework specified in the Communications Act has ensured that the PSBs' linear television channels (namely, all of the BBC's public broadcast television services, each Channel 3 service, Channel 4, Channel 5 and S4C) have been widely available and easy to find in electronic programme guides for decades. However, until the passing of the Media Act, there were no rules to secure the prominence of public service content in online media environments.

The Media Act inserted Part 3A into the Communications Act, introducing a new online availability and prominence regime focused on connected TV platforms, which enable people to select between and access TV apps, or to select between programmes provided via those apps. This new regime will require connected TV platforms designated by the Secretary of State to ensure that the PSB TV apps designated by Ofcom, as well as their public service content, are available, prominent and easily accessible.

Our Digital Markets Strategy

In our 2022 Digital Markets Strategy we set out that we would look at the position of certain digital content gateways and how they may affect competition and impact the range, quality or pricing of content available to people in the UK.[9] We explained we had a particular interest in audiovisual gateways: connected TVs, smart speakers and the supporting digital assistants and operating systems through which users access both traditional broadcast as well as on-demand and internet-native content.

Our work has since focused on connected TVs as gateways between content providers and audiences. Our powers to set access-related conditions to secure adequate access, interconnection and interoperability on connected TV platforms, in the interests of end-users, empower us to

[8] Communications Act 2003

[9] Ofcom, Digital markets in the communications sector.

examine whether competition enables content providers to access a range of platforms, such that viewers can discover a variety of TV content.

Alongside this document, we have also published an update on our areas of focus under our Digital Markets Strategy.[10] The update sets out how we will continue to monitor media and communications sectors to identify potential risks and benefits of digital services for consumers and businesses.

[10] Ofcom, Digital markets, communications and media: update to Ofcom's areas of focus, 2024.

Market context

This section provides background to our examination of how content providers access connected TV platforms. We first set out how audiences watch TV over the internet, including growth in the consumption of TV content online and the range of devices people use. We then explain how connected TV platforms link audiences with content providers. Next, we identify what connected TV platforms are available to UK audiences and summarise how the main platforms operate commercially.

How audiences watch TV online

Audience consumption of TV content online has grown rapidly

In 2023, the vast majority (86%) of primary TV sets in use in the UK were connected to the internet and could be used to watch TV content online.[11] Sixteen per cent of primary TV sets, or more than 4 million, were estimated to only have access to internet-delivered content and were not connected to any traditional broadcast network (digital terrestrial, satellite or cable). This proportion is expected to rise.[12]

As people watch more TV over the internet, including on-demand, they spend less time watching broadcast TV. The combined viewing of live TV and recordings of broadcast channels fell to 50% of total TV and video viewing in 2023,[13] down from an estimated 70% in 2017. Streaming and VoD viewing accounts for the vast majority of the other 50% of viewing time, driven primarily by subscription VoD services like Netflix, video-sharing platforms like YouTube and broadcaster VoD like BBC iPlayer.[14]

Audiences use a range of connected TV devices

Audiences can access TV content online through different hardware connected to the internet ('connected TV devices'). The most widely-adopted connected TV devices are:

- **Smart TVs:** internet-connected TV sets that allow audiences to access TV content online without additional hardware. There are more than 30 million smart TV sets in use in the UK in 2024.[15]
- **Set-top boxes:** streaming devices that allow audiences to view broadcast and pay TV content on a TV set. Modern set-top boxes are connected to the internet and allow audiences to access TV content online. There are close to 24 million connected set-top boxes in use in the UK in 2024.[16]

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[11] 'Primary TV sets' refer to TVs that are most frequently used in a household and exclude other TV sets used in the same household.

[12] 3 Reasons/MTM analysis for Ofcom, Future of TV Distribution.

[13] Across broadcast TV, VoD services and video-sharing platforms. Also includes viewing of physical media (e.g. DVDs) and some unidentified TV use, such as EPG/menu browsing, viewing when the audio is muted, piracy, unmeasured box-sets/pay-per-view content and non-video internet activity through a PC or other device connected to the TV.

[14] Ofcom analysis of TV and video viewing data. 2023 data is BARB as viewed on TV sets and other devices in the home; 2017 data is estimated based on BARB, Touchpoints and ComScore.

[15] Omdia.

[16] Omdia.

- **Other streaming devices:** external devices that connect to a TV set and allow audiences to access TV content online. The most common type of streaming device (after set-top boxes) are streaming sticks, which audiences can purchase at relatively low cost and do not require a subscription. There are more than 10 million streaming devices in use in the UK in 2024, supplied by five main providers.[17]

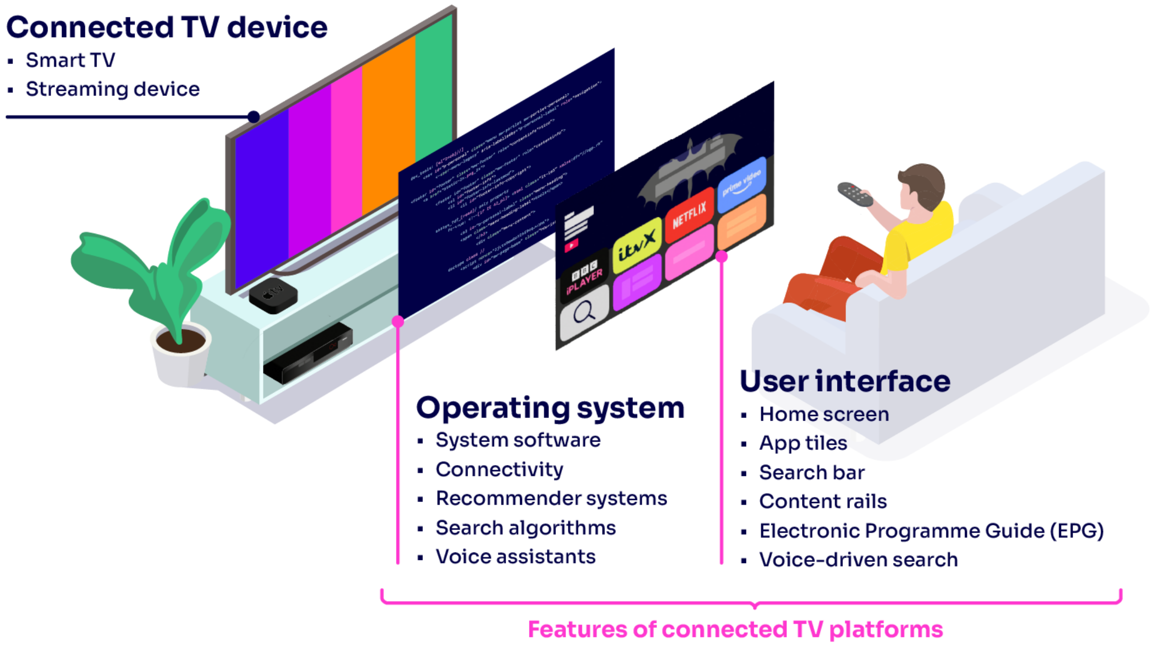
Audiences can use a combination of connected TV devices to watch content. For example, they may choose to watch through a smart TV's in-built functionality or to navigate to inputs from other streaming devices connected to the smart TV. Audiences may also watch TV content online on other devices, such as laptops, desktops, mobile phones and games consoles.

How connected TV platforms link audiences to content providers

All connected TV devices run a software platform, just like a desktop computer or mobile phone. This software platform, which we refer to as a connected TV platform, is a service that allows viewers to find and access content and determines how content providers can reach audiences.

As Figure 1 below illustrates, a connected TV platform's main features include an operating system and a user interface. The operating system is the underlying software that manages the device and supports a range of content applications and other functions, such as connecting the device to the internet. The user interface is the visual layer of the platform with which viewers interact. It allows viewers to navigate content: for example, by browsing recommendations, searching (including by using their voice), using an electronic programme guide (EPG) or accessing content apps.

Figure 1: Connected TV devices run a software platform (connected TV platform) that includes an operating system and a user interface



Source: Ofcom.

[17] Omdia. Excludes set-top boxes.

Device manufacturers must either develop and operate their own connected TV platform or license one from a third party. Connected TV platforms act as intermediaries between audiences and content providers, as shown in Figure 2, below. Content providers supply their apps and internet-delivered channels to platforms, for platforms to distribute to their users. The platform operator controls what and how content is shown to viewers on the TV screen.

Figure 2: Connected TV platforms are intermediaries between audiences and content providers

Source: Ofcom.

Connected TV platform operators must attract both audiences and content providers to be viable commercially. Audiences are unlikely to use a platform with little content, while content providers may not supply content to platforms with a small audience. A platform operator will therefore seek to provide a wide range of content to attract audiences and retain their attention. Likewise, it will aim to set commercial terms that attract a range of content providers to supply their content and develop apps for the platform (we discuss these terms in the next section).

As more people watch TV online, connected TV platforms have become more important routes for content providers to reach audiences. Accordingly, some content providers are already making strategic decisions that prioritise streaming services over broadcast channels. For example, among the PSBs, ITV has closed its children's channel CITV in favour of distributing children's content through the ITVX Kids on-demand service.[18] Similarly, Channel 4 is shifting its focus from traditional broadcasting to online, with plans to close some of its smaller linear channels and the goal of becoming a digital-first public service streamer by 2030.[19] Among global content providers, Disney made the Disney+ subscription VoD service the exclusive home of all Disney content in the UK, following the recent closure of its broadcast channels on Sky (Disney Channel, Disney XD and Disney Junior).

Figure 3 shows the most popular content providers accessed online via connected TVs. In the first two quarters of 2024, Netflix and YouTube were the most popular on-demand service and video-sharing platform, respectively, on connected TVs in the UK (measured by average daily viewing time).

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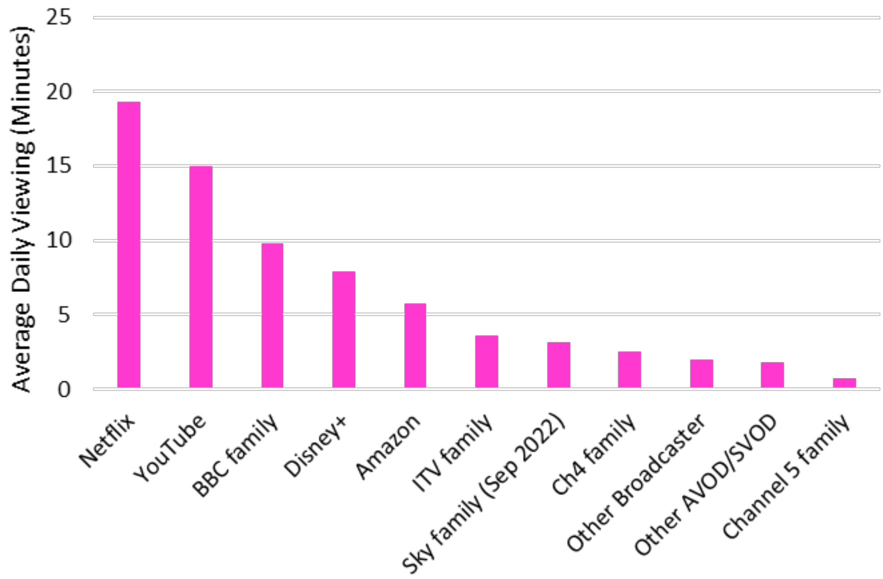
[18] ITV News, ITV announces closure of CITV in favour of streaming-only children's contents.
[19] Channel 4, Channel 4 shares plans to become digital-first public service streamer by 2030. In 2024, Channel 4 closed its music-based channels including Magic, 4Music, Kiss and Kerrang.

Figure 3: Average daily viewing for video-sharing platforms, broadcast VoD and subscription VoD on connected TV devices (Q1/Q2 2024)



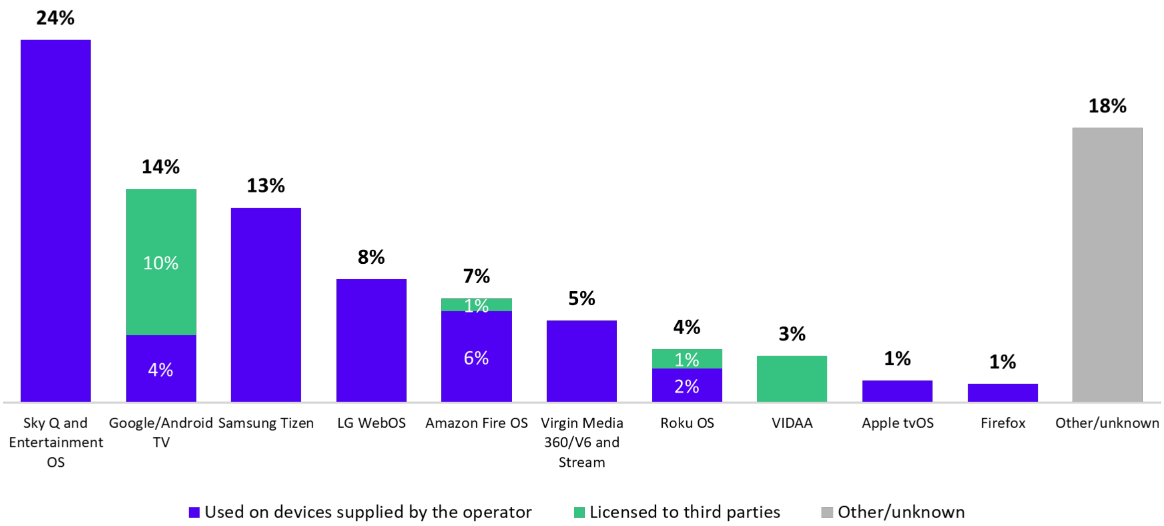
Source: BARB, January-June 2024. Does not include linear broadcast viewing.

Connected TV platforms available to UK audiences

A broad range of connected TV platforms are available to UK audiences today. Figure 4 sets out the main connected TV platform operators and presents estimates of their market shares, measured by the number of active connected TV devices using a platform supplied by the operator.[20] Sky, Google and Samsung are the top three connected TV platform operators in the UK. They account for more than 50% of the market collectively. Three other platform operators (LG, Amazon and Virgin Media) each have a market share above 5%. No single operator has a share that exceeds 25% of the market.

[20] In this document we use the terms 'market' or 'market share' in a general sense. They do not refer to market definition under a formal competition law assessment.

Figure 4: UK connected TV platform operators by share of devices in active use (2024)



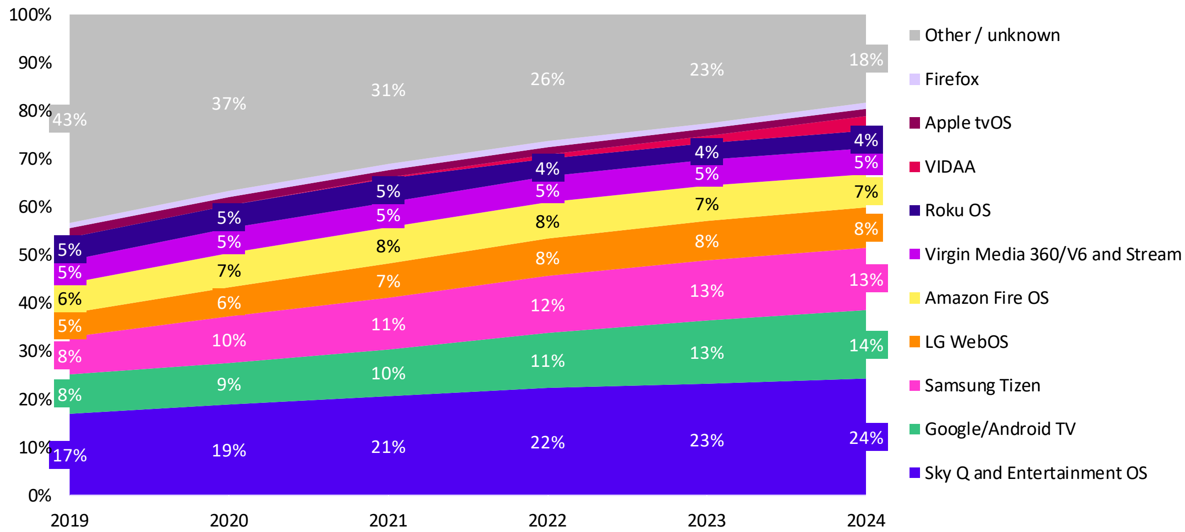
Source: Omdia; Ofcom market share analysis. Notes: All devices in active use, including on secondary TV sets. For pay TV providers like Sky, this includes additional set-top boxes provided to the customer as part of the same subscription (e.g. a 'multiroom' subscription). 'Other/unknown' includes connected TV platforms YouView and Freeview/Freesat. It also includes some platforms for which the data cannot yet be measured accurately, some of which may include the platforms listed in the figure. VIDAA share of devices are classified as "licensed to third parties" as VIDAA was established by Hisense and other investors to operate as an independent company.

Some platform operators license their connected TV platforms for use on third-party devices. These operators typically do not receive payments from the device manufacturers to use the platforms, i.e. they license them for free. Some platform operators may even pay device manufacturers to use their platforms. In this way, a platform operator can broaden its audience reach and potentially generate more revenue from content providers and advertisers (we further discuss licensing of connected TV platforms later in this section).

Platform operators' market shares associated with licensing activity are shown in the green bars in Figure 4 above. Google is the largest platform operator to license its connected TV platforms (i.e. Google TV and Android TV) to other device manufacturers. Of all devices that run on Google's connected TV platforms, nearly 70% are supplied by third-party manufacturers who license these platforms from Google. Other operators, such as Amazon, Roku and Samsung, also license their platforms, but to a lesser extent. Overall, licensing represents a small proportion of the market today.

The shares of the largest connected TV platform operators have increased steadily in recent years. Figure 5 below shows that the six largest operators (Sky, Google, Samsung, LG, Amazon and Virgin Media) accounted for more than 70% of supply in 2024, up from just under half of the market in 2019.

Figure 5: UK connected TV platform operators by share of devices in active use (2019-2024)



Source: Omdia; Ofcom market share analysis. See additional notes in Figure 4, above, that are also applicable to this data.

How connected TV platforms operate commercially

Platform operators generate different kinds of revenues

Connected TV platform operators generate revenues from multiple sources. Some revenues are made directly from consumers: for example, from sales of smart TVs (e.g. Samsung, LG) or other streaming devices that the operator manufactures and that runs its connected TV platforms (e.g. Google Chromecast, Amazon Fire TV stick). Other platform operators do not sell hardware but charge customers for pay TV subscriptions and offer set-top boxes that use their connected TV platforms as part of their service (e.g. Sky and Virgin Media).

Platform operators can also generate revenues from content providers. For example, some may take a share of the revenue that content providers earn from their customers' subscriptions or transactions made on the platform, as a requirement of the terms of their platform's app store. Some platforms may take a share of content providers' advertising inventory or revenue. In return, content providers may access the platform and, potentially, secure prominent spots on the user interface to promote their content.

Moreover, most platform operators provide their own content services to audiences. They can earn subscription or advertising revenues associated with these services.

Finally, some tech firms such as Google and Amazon offer connected TV platforms as part of a broader ecosystem of digital products and services. They may generate revenue from their connected TV platforms indirectly, including by using audience data for advertising or within smart home products and services. For example, Alphabet's annual report notes that advertising is an important revenue source for its Google Services business, which includes connected TV platforms, but it also generates revenue from consumer subscriptions, app sales, in-app services and devices.[21]

Some operators license their platforms to third parties

As set out above, some connected TV platform operators license their platforms to third-party device manufacturers. This enables the platforms to reach a wider audience and increase potential

[21] See Alphabet, Annual report 2024, Part 1, p.4.

revenues. Device manufacturers can focus on supplying hardware, while connected TV platform operators control their technical specifications and commercial relationships with content providers.

Table 1 below is a non-exhaustive list of connected TV platforms available to UK audiences today and examples of the connected TV devices running the platform. It summarises the platform operators' main business approach (i.e. whether it is primarily a device supplier, pay TV operator and/or a tech firm) and devices supplied by each platform operator. It also identifies to which third-party device manufacturers these operators license their platforms in the UK.

Table 1: Examples of connected TV platforms and associated devices

Types of connected TV platform operator	Connected TV platforms	Platform operator's devices	Examples of third-party device manufacturers licensing platforms
Smart TV or streaming device suppliers	Samsung Tizen	Samsung TV	RCA
	LG webOS	LG TV	Not licensed to third parties in the UK
	Roku OS	Roku Streaming Stick	JVC, TCL
Pay TV operators	Sky	Sky Q, Sky Glass, Sky Stream	Not licensed to third parties
	Virgin Media	360, Stream	Not licensed to third parties
Tech firms	Google TV[22]	Google Chromecast, Google Streamer	Sony, Philips, TCL, Sharp
	Android TV	N/A	TalkTalk, Sony, Philips, NVIDIA, Toshiba, TCL, Humax, Panasonic
	Amazon Fire OS	Fire TV Stick, Fire TV Cube, Amazon Fire TV	Panasonic, Toshiba
	Apple tvOS	Apple TV 4K	Not licensed to third parties

Source: Information provided by stakeholders including in response to Ofcom's formal information request and based on Ofcom desk research.

[22] Google TV is a rebranded evolution of Android TV. Google states on its website that *"Google TV is powered by an underlying operating system called Android TV OS. Some smart TVs and streaming devices are powered by Android TV OS but do not have the Google TV interface. These devices are referred to as Android TV devices."*

Most major platforms are vertically-integrated with content services

Most major connected TV platform operators are vertically-integrated with a content production arm and/or content aggregation service(s).[23] For example, operators such as Sky and Amazon provide access on their platforms to their own content services (i.e. through Sky's original programming or Amazon Prime Video). Google provides access to YouTube. Other providers, including Amazon, Samsung and LG, supply free ad-supported streaming television (FAST) services.

The way in which connected TV platforms generate revenues, and the extent of their vertical integration, both affect their commercial incentives. This can in turn influence their negotiations with content providers. We consider the type of commercial terms that connected TV platform operators and content providers negotiate in the next section.

[23] Aggregation means bringing together content from various sources and presenting it in one service.

Commercial agreements for distribution

For the millions of people watching TV online to have access to a wide range of content, content providers must reach distribution agreements with different connected TV platform operators. This section examines those agreements. We draw on information we have obtained from the largest platform operators and consider the extent to which their commercial agreements indicate that content providers are able to access a range of platforms and reach audiences online.

Platform operators have varied relationships with content providers

Content providers are generally able to sign up to at least basic agreements for the distribution of on-demand services on connected TV platforms on standard terms and conditions. Some providers can also negotiate bespoke contractual arrangements.

Standard terms can enable basic access to platforms

Where platform operators offer standard terms and conditions to content providers for the distribution of their content, these typically enable content providers' applications to be available for download through the platforms' app stores. Standard terms generally require content providers' applications to meet certain technical performance or compatibility requirements.

In return for making content providers' applications available, as part of standard terms platform operators typically receive a percentage share of the revenues that content providers generate on the platform. These revenues can include a combination of advertising sales, subscription payments signed-up to through the platform or payments for in-app purchases of TV shows, movies or one-off events.

Some connected TV platform operators that provide 'supply-side' services to facilitate the sale of digital ads seek a share of advertising inventory from content providers. They sometimes also require content providers to use the operator's services to sell their own ads. Similarly, operators that offer payment processing services as part of app stores sometimes require content providers to use these to process customer transactions.

For content providers, accepting standard terms and conditions for the distribution of content on connected TV platforms may be simpler and less resource-intensive than negotiating bespoke terms. However, standard terms may not suit all content providers and some have negotiated bespoke agreements with platforms.

Not all platform operators offer standard terms and conditions for the distribution of TV content online. For example, pay TV operators Sky and Virgin Media do not offer such terms.

Some content providers can negotiate bespoke contracts

A range of content providers are able to negotiate bespoke arrangements with connected TV platform operators instead of accepting standard terms. Bespoke terms are more common in agreements between platform operators and larger content providers. However, some platform operators have suggested to us that they will negotiate bespoke terms at the request of content providers and that they may do so with both global content providers and PSBs, depending on factors such as business goals, content type, service and scale. In practice, both platform operators and content providers prioritise negotiations that are most important to their businesses.

Through negotiation, content providers may receive more favourable terms or additional features compared to those available as standard. These may include paying a lower share of revenues (or none) or making a lower share of advertising inventory available to the platform operator (or none). They may also include greater prominence for applications and content (we discuss this below).

In some cases, UK content providers have signed up to distribution agreements negotiated through intermediaries such as Freeview Play or YouView, which agree terms for a number of providers. In this way, some smaller UK content providers may benefit from the bargaining power of larger players to obtain better terms than they could individually.

Outcomes of negotiations reflect different content providers and platform operators' bargaining power

In negotiation-driven markets, outcomes generally reflect the relative bargaining power between the parties. Our analysis of the commercial agreements suggests that more popular content providers, which are likely to have greater bargaining power, may have more frequently negotiated bespoke terms with platform operators than smaller providers and tend to negotiate better terms.

In practice, while platform operators' standard terms can enable them to take 15-30% of applicable revenues from content providers,[24] content providers may pay substantially lower rates after negotiation. In addition, some bespoke contracts restrict the scope of revenue that content providers must share with the platform operator.

As set out above, some operators of connected TV platforms seek to take a share of content providers' advertising inventory directly. This is likely to require a greater extent of technical integration between the parties than simply sharing revenue from advertising and, in practice, some content providers have negotiated exemptions to these terms. Occasionally, bespoke contracts can also include limited payments from platform operators to content providers to support integration or mitigate technical costs.

Platform operators monetise their ability to make applications and content more prominent

As intermediaries between content providers and viewers, platforms control the display of content to audiences. This function gives connected TV platform operators the ability to monetise prominent spots on their user interfaces by offering them to content providers seeking to improve their discoverability.

Platform operators offer a range of ways to make applications and content more prominent to viewers

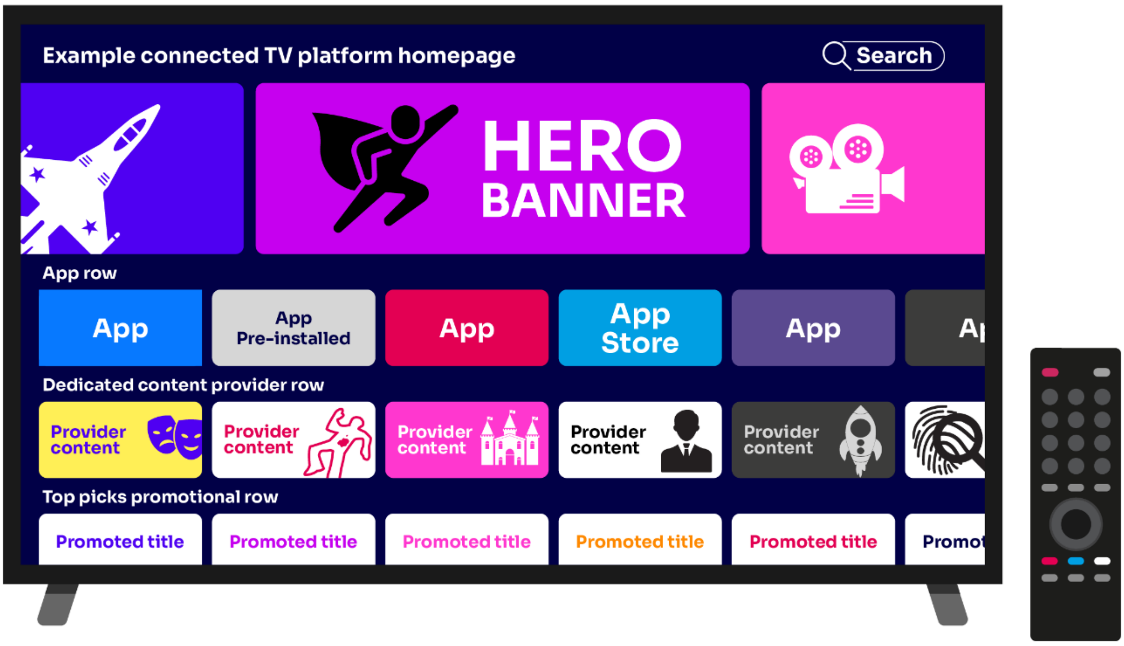
Standard terms usually only guarantee that content apps will be available for download from platforms' app stores. Platform operators and content providers may negotiate over a range of options for prominence. Our analysis of contracts shows that the most common forms of

[24] Range informed by standard terms from Google, Amazon, and Samsung.

prominence that platform operators make available to content providers are the following (illustrated in Figure 6):

- **App placement** makes apps more visible to users by guaranteeing a specific position on the homepage app row.
- **Pre-installation** means users do not have to find and download applications manually. With app placement, pre-installation is one of the two main prominence-related terms prioritised and negotiated over by platform operators and content providers.
- **Rows of content dedicated to content providers** on the homepage are available on most platforms. These rows allow for content providers to curate a selection of their content directly.
- Almost all platforms offer some form of **on-platform promotion**, which features applications or individual pieces of content on easily-visible areas of the user interface. These include 'hero banners', 'top-picks' or sponsored slots, usually as part of time-limited campaigns.
- **Integration with search functionality** allows for users to search content providers' catalogues directly through platforms' universal search features or using voice assistants. In some cases, platforms can identify keywords associated with certain content providers' applications or content and surface these differently in search results. Integration also allows for content to be featured in disaggregated content areas such as 'genre rows' (e.g. "New UK dramas").
- Platform operators can, in some cases, also reserve **remote control buttons** and other opportunities, such as **inclusion of logos on device packaging**, for priority partners.

Figure 6: Forms of prominence on the user interface of a connected TV platform and associated remote control



Source: Ofcom.

Larger content providers appear to negotiate for prominence more successfully

Some platform operators monetise specific forms of prominence directly, charging upfront or recurring fees for some placement options or promotional campaigns as part of bespoke agreements. The scale of the payments content providers make to platform operators varies, reflecting the different value associated with the placement commitments and differences in bargaining power.

More commonly though, prominence options are negotiated as part of the overall exchange of value between platform operators and content providers. Larger content providers that are popular with audiences and/or able to pay the most are most likely to secure the principal options for prominence, including app placement, or options that are scarcer, such as dedicated remote control buttons.

Outcomes for smaller content providers with respect to prominence on platforms appear mixed, sometimes depending on collective contractual relationships for distribution on platforms. They typically receive more limited on-platform promotion and less valuable app placements, although some smaller UK content providers have negotiated prominence features as part of bespoke contractual relationships.

Conclusion

Our analysis of the commercial arrangements above suggests that content providers are generally able to distribute content through a range of connected TV platforms today. However, we note that the opportunity to negotiate more favourable bespoke terms with platform operators, such as for enhanced prominence, is more commonly available to certain popular content providers. This could mean that other content providers, particularly those with a weaker bargaining position relative to the platforms, may find it more challenging to reach audiences online.

We will continue to monitor market developments to ensure that content providers can continue to distribute their content effectively, allowing UK audiences to benefit from a wide range of high-quality content and services. Related to this, our ongoing Media Act implementation work will ensure that audiences can readily access and discover content from all UK PSBs on connected TV platforms.

Self-preferencing on connected TV platforms

We have noted above that most major connected TV platform operators are active in the supply and/or aggregation of content. This section considers why these operators may have an incentive to promote their own content ('first-party' content) over competitors' content on their connected TV platforms (self-preferencing). This is relevant to understanding how well competition between connected TV platforms is working and, specifically, whether competition enables content providers to access a range of platforms. This section also illustrates the self-preferencing practices we have observed.

Vertically-integrated connected TV platform operators have the ability and incentive to self-preference

As set out above, most major platform operators are vertically-integrated with content providers or aggregators. By controlling the display of content on their connected TV platforms, these operators can treat their own services more favourably than those provided by third parties. Preferential treatment could include, for example: more prominent placement of the operator's own content on the user interface; higher positions for its apps on app rows; more favourable display of content in search results; or setting the platform's services as the default option for users.

The extent to which a platform operator has the incentive to self-preference depends on a number of factors and trade-offs. In principle, self-preferencing can benefit the operator: by giving greater prominence to its own content, audiences are more likely to watch it, allowing the operator to generate more revenue from advertising, subscriptions or transactions. This can ultimately benefit audiences, where benefits to platform operators enhance their incentives to supply more content.

However, self-preferencing can pose some risks to a platform operator. For example, it may make it harder for audiences to find content they like from rival content providers, which can degrade the platform's quality and drive audiences to spend more time on rival platforms (e.g. watching through other streaming devices or switching to rivals). Moreover, as prominence is limited, giving priority to first-party content means the platform operator may forgo revenues from third-party content providers that may have been willing to pay for the most prominent positions on the user interface.

Self-preferencing behaviour could affect competition between content providers and reduce audience choice. For example, it could put third-party content providers at a disadvantage compared to platform operators that promote their own content, potentially undermining those rivals' ability to access audiences effectively. Over time, this could limit the variety of content available to audiences. Generally, in situations where the self-preferencing firm has a greater degree of market power as a platform operator and/or as a content provider, it is more likely to affect competition adversely.

Self-preferencing appears common across large connected TV platforms

Self-preferencing takes place in various formats across the major connected TV platforms that we examined.

We carried out desk research in October/November 2023 and August 2024 by reviewing how some major connected TV platforms present content on their user interfaces.[25] We considered questions such as:

- How each platform presented content on their home page.
- What promotional spaces were available.
- What types of content were shown on these spaces.
- How apps were organised.
- How each platform responded to some sample search queries.

We recognise that our findings reflect only a snapshot of each platform's approach at the time of the research, that the way platforms display content can change quickly and that this may depend on context such as the device, user profile and settings used. As such, our observations below are illustrative only.

Based on this research and information received from stakeholders, we have identified the following examples of platform operators promoting their own content:

- **Preferential app placement**: preferential placement means placing the platform operators' apps towards the beginning of an app row. We observed platforms reserving the first, third and fifth positions in rows dedicated to apps for their own content app. Other platform operators have standard terms suggesting that they reserve the right to give greater prominence to their own apps than they provide to third-party content providers (Figure 6, above, illustrates how apps can be placed on the user interface).
- **Pre-installation of platforms' own apps:** a platform explained to us that it preinstalls some of its own apps. While it offers third-party content providers other options to make their apps appear prominently on the platform, it does not currently preinstall third-party apps.
- **Promotion of own content on prominent areas of the platform:** our research suggests that some platforms featured their content on the user interface prominently and/or at a high frequency. This included the largest content promotional space on the home screen (the hero banner) or in recommended content rows.
- **Preferential display of own content in search results**: platforms have stated to us that the ranking of search results is determined by a range of objective factors: for example, relevance, whether the user has a subscription to a service or whether the service is free. However, our research indicated other ways in which platforms favour their own content in the display of search results. As an illustrative example, in a search exercise we carried out one platform returned its own content in half of the first ten search results.
- **Cross-services log-on:** we have observed that some platforms prompt users to sign into accounts or profiles that the user has set up with the platform operator. The platform may simultaneously log the user into its content apps, while making services to which they are logged in appear more prominent (for example in search results and recommendations).

[25] We examined Amazon, Google (Android TV and Google TV), LG, Samsung and Sky's platforms.

Conclusion

Our analysis illustrates that self-preferencing is common and that major platform operators appear to promote their own content services in multiple ways. Although we have not evaluated its impact on competition between content providers, experiences in other digital markets suggest that self-preferencing by firms with market power could affect competition and reduce consumer choice. We will monitor market developments and consider any risks of self-preferencing restricting access and leading to discriminatory outcomes that could ultimately restrict the choice of content available to audiences.

Features of competition on connected TV platforms

In this section, we consider whether certain features of the connected TV platform market may give rise to barriers for some platform operators to expand or for new platform operators to enter. If the market were to become more concentrated in future because of such barriers, platform operators could gain stronger bargaining power over content providers, which could make it harder for content providers to access a range of platforms and reduce choice for audiences. Several stakeholders, including platform operators, device manufacturers and content providers, voiced concerns on the risks that the market could consolidate to platforms operated by one or two tech firms.

Large platforms can benefit from network effects

Network effects occur whereby a service becomes more valuable when more people use it. For connected TV platforms, content providers are more attracted to platforms with larger audiences and audiences are more attracted to platforms that offer a greater range of content. This means large incumbent platforms can benefit from economies of scale. For similar reasons, platforms with a larger base of content providers are also more attractive to device manufacturers that choose to license a platform from a third party.

Network effects are stronger when content apps are designed specifically for certain platforms and where development costs are high (as with 'native' apps).[26] The higher the cost to develop an app, the more likely content providers will only invest in platforms with a large audience. This makes it harder for smaller platforms to attract content providers, which in turn makes them less appealing to audiences and limits their growth.

On the other hand, network effects are weaker when the same apps work across multiple platforms with low additional development costs (as with 'web' apps).[27] In this case, content providers are more likely to offer their apps on many platforms to reach a wider audience without incurring much additional cost. Therefore, the use of web apps based on a common standard lowers the barriers for smaller platforms to grow.

Irrespective of whether content providers needed to develop web apps or native apps, content providers offered mixed views on the ease of, or barriers to, developing apps for multiple connected TV platforms. For example, some content providers said that developing apps for multiple connected TV platforms was not a barrier, given relatively common standards across the industry, whereas others noted a need to prioritise investments.

Moreover, some platform operators offered a financial contribution to some content providers to develop apps and integrate their content for use on their platform or to reduce fees they pay to the

[26] Native apps are apps written to run on a specific operating system and interact directly with elements of operating systems to provide relevant features and functionality. See CMA, Mobile ecosystems: Market study final report, paragraph 2.6.
[27] Web apps are applications built using common standards based on the open web and are designed to operate through a web browser (rather than being specific to an operating system). See CMA, Mobile ecosystems: Market study final report, paragraph 2.7.

platform operator. These arrangements could strengthen the position of the incumbent connected TV platform operators over rivals that are less able to do so.

Most connected TV platforms currently have a range of TV and/or other entertainment apps available. Audiences can access the most popular apps on most platforms. Moreover, for some viewers who use multiple devices and platforms to watch TV online (e.g. by attaching additional streaming devices to a smart TV), content providers can to some degree reach them through different platform operators without having to rely on the largest ones. However, while network effects may not have limited the range of connected TV platforms available to audiences today, we recognise that markets can change quickly. For example, if the cost of developing new apps for multiple platforms increases in future, more content providers may start to focus on developing apps for only the largest platforms.

Incentive payments from platforms to device manufacturers could influence market dynamics

In addition to competing for audiences, some connected TV platform operators compete to reach deals with device manufacturers to license their platforms and increase their reach. A choice of platforms for device manufacturers to license is another key driver of effective competition, ultimately ensuring content providers can access a range of platforms and benefiting audiences.

As shown in Figure 4 above, licensing represents a relatively small proportion of the market today. Google has the largest number of devices using its licensed platforms in the UK today. Other platforms, such as Amazon Fire TV, are licensed to third parties, but to a lesser extent. Platform operators that license their platform tend not to require payment from device manufacturers (i.e. they do so for free). Some operators offer payments to device manufacturers to encourage them to adopt the operator's platform. The ability of large platform operators to incentivise device manufacturers to license their platforms may make it harder for smaller platforms to grow.

We note that, in its mobile ecosystems market study, the CMA concluded that Google's payments to device manufacturers acted as a significant barrier to entry for new entrants.[28] In principle, similar concerns could arise in the connected TV platform market. The extent of any impact would depend on, amongst other factors, the size and prevalence of payments.

Access to rich user datasets may give competitive advantage to some platforms

As set out above, some connected TV platforms are part of an operator's broader ecosystem of digital products and services. Some platforms can collect and combine user data from multiple online activities to enhance their services. For example, they can use this data in the context of ad tech businesses to provide measurement and attribution services to advertisers and to serve targeted, personalised ads on connected TV platforms.[29] They can also draw on data collected from a large number of users across a wide range of activities to develop personalised content recommendation or search algorithms for connected TV platforms.

Economies of scale and scope can often lead to better services and benefit audiences. However, experiences from other digital markets suggest that superior access to user data can often give large

[28] See CMA, Mobile ecosystems: Market study final report.
[29] See SparkNinety for Ofcom, Connected TV advertising market dynamics, 2020.

tech firms significant competitive advantage, which can make it very challenging for other rivals without access to similar data to compete effectively. This has been the case in markets such as online search, digital advertising and mobile ecosystems.[30]

Conclusion

Taken together, it is possible that the market features noted above could hinder the growth of small platform operators and the entry of new competitors in the future. There is a risk that content providers and device manufacturers may prefer to focus on large incumbent platforms, leading to 'market tipping'. Large tech firms could also seek to leverage their strengths in related digital activities, thereby increasing this risk. Ultimately, this would weaken content providers' bargaining power with platform operators and limit their ability to access them on reasonable terms.

Experience from other digital markets suggests that competitive conditions can change rapidly. For example, mobile ecosystems seemed competitive over a decade ago, but competitors fell away and Apple iOS and Google Android became a duopoly. We will therefore monitor developments in the connected TV platform market and consider if intervention is required in the future to maintain competition and choice.

[30] See for example, CMA, Online platforms and digital advertising market study: final report, 2020, including Appendix F: the role of data in digital advertising. Also see Unlocking digital competition: Report from the Digital Competition Expert Panel, 2019.