

<p>Title: Regulation of radio services across voice assistant platforms</p> <p>IA No:</p> <p>RPC Reference No: RPC-DCMS-5285(1)</p> <p>Lead department or agency: Department for Culture, Media and Sport</p> <p>Other departments or agencies: N/A</p>	<p style="text-align: center;">Impact Assessment (IA)</p> <p>Date: November 2023</p> <p>Stage: Final</p> <p>Source of intervention: Domestic</p> <p>Type of measure: Primary</p> <p>Contact for enquiries: enquiries@dcms.gov.uk</p>
<p>Summary: Intervention and Options</p>	<p>RPC Opinion: Fit for purpose</p>

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status Qualifying provision
NQ	NQ	NQ	

What is the problem under consideration? Why is government action or intervention necessary?

Over recent years, the rapid growth of internet-connected audio devices, alongside improvements in connectivity, has given UK listeners new ways of receiving live radio - and other audio - services. In parallel, the increase in usage of voice assistants (around a third of UK homes now have access to a voice-activated speaker) has begun to change the way in which audio services are discovered and accessed on these devices. For now, listening to radio represents the majority of audio consumed (around 70% of audio listening on smart speakers), and smart speakers account for around 14% of total radio listening (up from nil in 2016); however, it is far from clear that this will remain the case. Given the risk of a shift in the balance of power between platforms and stations, it is important that the Government takes action to ensure that listener access to radio across these devices is protected over the years to come.

What are the policy objectives of the action or intervention and the intended effects?

The intended outcome of intervention is, broadly, that the behaviours of both the platforms and radio stations will remain as they currently largely are - mutually beneficial relationships allowing listeners to access licensed radio services on request, but whilst ensuring there is space for commercial deals to be agreed in relation to other content and services. Specifically, the success of these measures will be measured with reference to published radio industry data including on metrics such as overall listening and total advertising revenue (where relevant), as well as the number and variety of BBC, commercial and community stations which are still broadcasting over the coming years. However, it should be noted that these metrics will be subject to many other factors, including the impact of other work

currently ongoing within government in relation to digital markets, and our future evaluation of the impact of these measures will look at this in more detail, including in relation to the interactions between each intervention.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0 - do nothing: take no action to secure radio's position on voice-activated connected audio devices. Other work currently ongoing within government in relation to the Digital Markets, Competition and Consumer (DMCC) Bill may help to protect radio stations from anti-competitive behaviour by the platforms in the longer term, but will not secure those stations' access to listeners via the platforms in the first place.

Option 1 (preferred) - targeted legislative provisions to secure radio's access to listeners through connected audio devices. The measures proposed would ensure that radio is available to and findable by listeners, that it is received in the form in which it is provided (i.e. without content such as advertising being overlaid by the platforms), and that stations have much greater scope to nominate the route through which they are provided. This is our preferred option - the pace of change in IP radio listening and the pace at which harm was inflicted on other markets indicates that specific intervention is required in this market and to address this problem.

Is this measure likely to impact international trade and investment?		Yes		
Are any of these organisations in scope?	Micro No	Small No	Medium No	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: N/A		Non-traded: N/A

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 2026

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.



Signed by the responsible:

Date: 24/10/2023

Summary: Analysis & Evidence

Policy Option 1 (*preferred*)

Description: Primary legislation to underpin the free access of live, licensed UK radio services to the platforms, and their findability by listeners on request.

FULL ECONOMIC ASSESSMENT

Price Base Year 2019	PV Base Year 2020	Time period 10	Net Benefit (Present Value (PV)) (£m)		
			Low: N/A	High: N/A	Best Estimate: N/A

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	N/A		N/A	N/A
High	N/A		N/A	N/A
Best Estimate	N/A		N/A	N/A

Description and scale of key monetised costs by 'main affected groups'

The main impact of these regulations is a transfer of value from voice assistant platforms to radio. This is estimated to be between £36,900,000 and £142,559,000 per annum. There is some uncertainty in the value of this transfer, as there is likely to be some substitution between integrity of service and no cost access, and some overlap in the mechanisms through which these impacts are realised. Therefore, the values range from the minimum possible transfer as the revenue impact of integrity of service, and the maximum as the sum of all three impacts. Voice assistant platforms will also have to familiarise themselves with the legislation, which could include engaging their in-house legal teams as well as seeking external legal advice - we expect this cost to total £24,600. Radio stations will have to familiarise themselves with the legislation - we expect this cost to total £59,000.

Ofcom will have costs associated with the set-up of their regime, which are estimated to be between £3.2 million and £3.4 million. Ofcom will also have ongoing costs of monitoring and enforcement, estimated to be between £1.6 million and £1.8 million per annum. Where Ofcom will need to undertake additional activities, such as reporting to the Secretary of State on the adequacy of the regime and reviewing the Code of Practice, these are estimated to be a one-off cost of between £1 million and £1.2 million. As per Ofcom's fees principle, these costs to Ofcom will represent a cost to businesses.

Other key non-monetised costs by 'main affected groups'

Voice assistant platforms will have to adapt their products to fit the new requirements, but as they are currently compliant, we do not expect that they will have to change their actions for 'day-one' compliance. They may also have costs associated with engaging with radio stations, but we expect these will be low, as platforms already have simplified solutions that enable them to engage with radio and manage costs efficiently. Voice assistant platforms may also have to develop new processes to engage with Ofcom, but we expect these costs to be small.

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	N/A		N/A	N/A

High	N/A		N/A	N/A
Best Estimate	N/A		N/A	N/A
Description and scale of key monetised benefits by ‘main affected groups’				
<p>The main impact of these regulations is a transfer of value from voice assistant platforms to radio. This is estimated to be between £36,900,000 and £142,559,000 per annum. There is some uncertainty in the value of this transfer, as there is likely to be some substitution between integrity of service and no cost access, and some overlap in the mechanisms through which these impacts are realised. Therefore, the values range from the minimum possible transfer as the revenue impact of integrity of service, and the maximum as the sum of all three impacts.</p>				
Other key non-monetised benefits by ‘main affected groups’				
<p>Consumers are expected to benefit from wider choice in live radio content and easier access. This regulation will also protect the existing social benefits of radio, including benefits of content covering a diverse range of cultures and interests, benefits to society from news and information, and wellbeing benefits from reduced loneliness. Community radio will benefit from the same protections as commercial radio.</p>				
Key assumptions/sensitivities/risks			Discount rate (%)	N/A
<p>This assessment is underpinned by the assumption that listening to radio online will continue to grow as new voice-activated connected audio devices take share from traditional FM or DAB radio and other forms of IP listening. This assumption is supported by evidence on online radio listening, and forecasts of future listening.</p> <p>There is also an assumption that there is a risk we will end up in a non-benign scenario. These regulations aim to protect radio stations from potentially harmful actions that are more likely to occur in a non-benign scenario. The evidence used in this analysis suggests that this risk is tangible, and that the value transfer could be substantial even in a benign scenario.</p>				

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:N/A			Score for Business Impact Target (qualifying provisions only) £m: N/A
Costs: N/A	Benefits: N/A	Net: N/A	

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1.0 Policy Rationale

Policy background

Definition: Voice Assistants

The term “Voice Assistant” describes the software that interprets, analyses, and responds to natural language commands from users by offering access to content services information stored in the cloud. Typically, users interact via voice commands (but can also interact in other ways). Voice Assistants are integrated into many different types of consumer devices, including smart speakers, laptops/desktops, watches, smartphones, cars, TVs and on IoT (Internet of things) devices.

Voice Assistant services in the UK are principally provided by large digital platforms (“Voice Assistant platforms”) such as Google, Amazon (Alexa) and Apple (Siri). These Voice Assistant platforms incorporate their Voice Assistant services on their proprietary hardware (including smartphones, smart speakers and other smart home devices and integrated car systems) and may license their Voice Assistant technology to third party providers to include on third party devices or interoperate with third party services.

Voice assistants open the way for the development of a wide variety of new digital services through integration with a range of devices. Developments in voice AI are expected to greatly improve the sensitivity and reliability of voice assistants.

1. Technology is changing lots of aspects in our lives and businesses, not least within the media environment. The pace of technology adoption is quickening, and it is important to ensure that the regulatory environment for media - including radio - remains capable of addressing the latest challenges facing it.
2. Radio has been a central part of UK public life for more than a century. To this day, nearly 90% of the public tune into UK radio stations every week, and listen for an average of more than 20 hours¹. Alongside its presence in the home, radio is also a core feature of the in-car experience - research carried out in 2021 indicated that 90% of recent and prospective car buyers in the UK considered that a broadcast radio tuner should be standard equipment in every car, a trend which was consistent across age groups; and more than 80% of potential car buyers said that they would be less likely to buy or lease a vehicle which was not equipped with a built-in radio tuner².
3. Radio’s continued success is testament to the fact that widely available, free-to-air stations provide trusted news and information, entertainment and connection, and a range of social benefits such as travel information and companionship to the isolated and lonely. The growth of commercial radio over the last 50 years and the emergence of

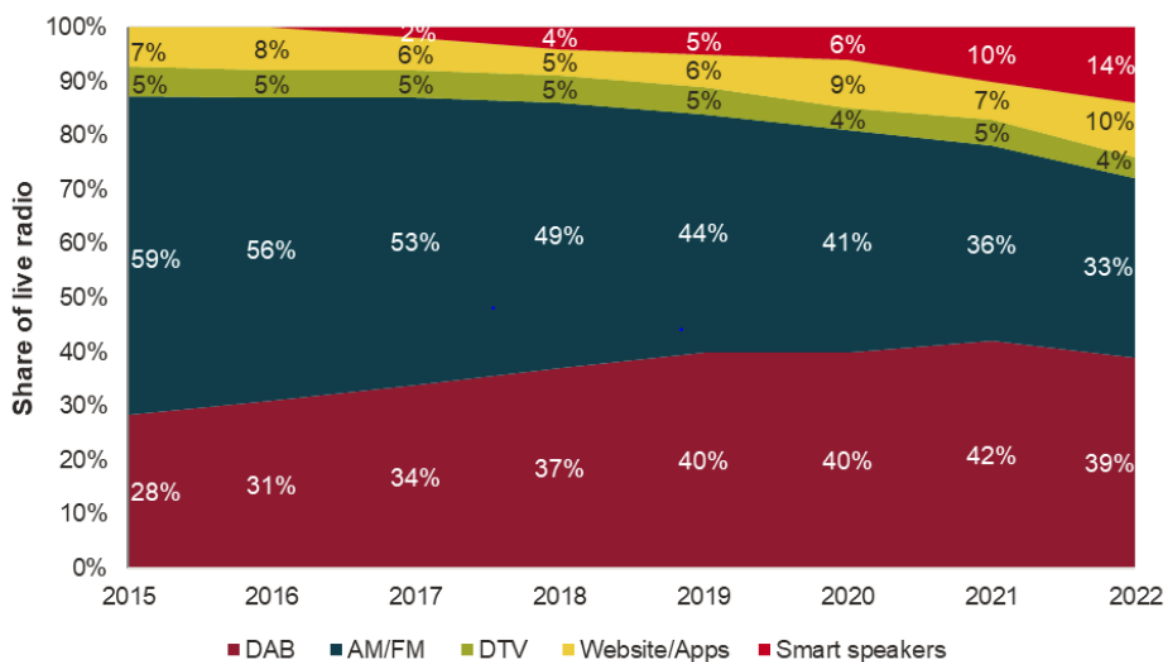
¹ [RAJAR figures, Q3 2023](#)

² https://www.worlddab.org/news/original/WorldDAB_press_release_-_90_percent_car_buyer.pdf

community radio over the last 20 have complemented the variety and plurality of services provided by the BBC, and the result is a vibrant sector providing immense public value across the whole of the UK.

4. This social value takes many forms, all underpinned by a strong licensing framework which includes compliance with content standards set out in the Ofcom Broadcasting Code. Many stations provide local news and information - and radio is regularly found to be the most trusted medium in Europe³; others provide a platform for local music; some serve as a forum for debate on matters of national importance; and all provide listeners with a sense of connection which, for some, can be a lifeline.
5. However, the regulatory environment within which radio operates was designed for a world of terrestrial listening, through devices with dedicated analogue or digital tuners. Since 2016 and the UK launch of the Amazon Echo, an increasing proportion of radio listening - 14% as of Q3 2023⁴ - is over devices whose voice-activated operating systems place them in a position to act as a gatekeeper between UK listeners and radio content, and thereby to be able to restrict radio listening (potentially in favour of their own competing audio services).

Figure 1: Live radio audio share in the UK, by distribution channel



Source: Frontier Economics elaboration of Rajar MIDAS survey data.

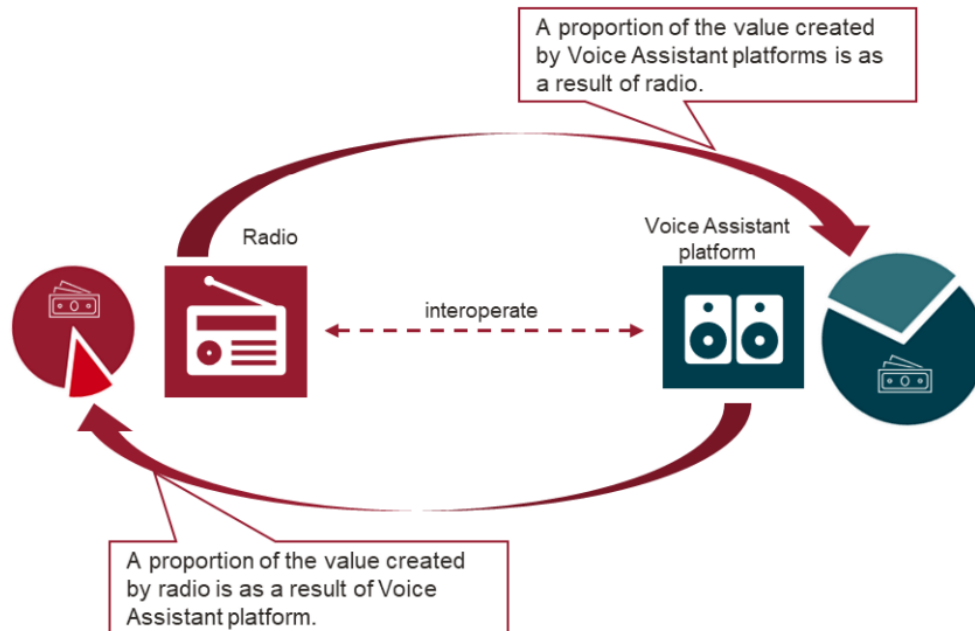
6. Radio service providers and voice assistant platforms each generate 'gains from trade' from interoperating. Radio protects or gains incremental listening which enables it to earn incremental commercial revenues, and voice assistant platforms gain from having

³ Eurobarometer survey from the European Commission, as cited by [Radiocentre](#)

⁴ [RAJAR figures](#)

radio present, for example through incremental sales of their products, the familiarisation of users with voice commands and the apps that support the interface or through the use of data. This is illustrated in Figure 2.

Figure 2: The gains from trade for voice assistant platforms and radio



Source: Frontier Economics.

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7. Our current assessment is that radio is likely to be adding more value to the platforms than the platforms add to radio. For example, in addition to being one of the main uses of smart speakers (with 58% of smart speaker owners using their device to listen to live radio⁵), radio stations regularly include detailed “calls to action” supporting listeners on smart speakers and giving information on how to access services, helping to present devices as a product endorsed and supported by radio stations. However, as smart speaker penetration and usage grows and platforms continue to develop complementary and competing services, there are risks of a shift in bargaining power in favour of the platforms.

Market context

8. While voice recognition software has existed in some form for more than 50 years, what we now recognise as voice assistants are a more recent development - Apple first brought Siri into its iPhone in 2011, while Alexa was introduced by Amazon in 2014. In simple terms, these voice control services enable a person to carry out everyday tasks - making phone calls, checking the weather, lowering their blinds - by using common speech rather than physical actions or selecting from prompts on a screen.

⁵ [Ofcom Tech Tracker, 2023](#)

9. Smart speakers facilitated by voice assistants first entered the UK market in 2016, when Amazon launched the Amazon Echo. Devices such as this and the Google Nest allow users to access various IP-driven services (e.g. online shopping, weather and travel updates, music streaming) and to navigate these through the underlying platforms' voice assistants (and their interpretation of spoken requests), rather than more directory-style screen-based interfaces (though many devices still allow for both screen-based control and voice control). As touched on above, one of the main uses of smart speakers is to listen to radio, and overall, smart speaker listening accounts for 14% of all UK radio listening.
10. This shift of radio listening from radio devices and from other online devices has been driven by the rapid adoption of smart speakers in the UK, a trend that accelerated during the Covid-19 pandemic. According to GFK⁶, 40% of UK households now own a smart speaker device, and although sales have fallen since 2021, GFK's data still shows sales of around 2 million units per year - more than twice the annual sales of DAB radios. One of the driving forces for the rapid growth has been that the products developed by Amazon, Google and Apple in particular (as touched on above) integrate with other services and technologies to provide a wider range of smart technologies supported by voice assistants. Currently, the UK domestic smart speaker market is dominated by Amazon (who account for about 75% of smart speaker ownership) and Google (15%), with the current leading brand-integrated devices being the Echo and Nest respectively; Apple also offer devices such as the HomePod, as well as integrations in the car. However, internationally, Chinese providers such as Baidu, Alibaba and Xiaomi are believed to account for around 30% of global sales⁷.
11. Historically, the car has been an important market for radio (accounting for 25% of radio listening⁸). Cars across the range have incorporated radio tuners for many years, and fitment of digital radio is near-universal in new cars in the UK market (in part as a result of legislation passed in 2020 providing that integrated radio receivers in cars must be capable of receiving digital services⁹). The car environment has evolved rapidly over the past five years due to the emergence of a range of connected technologies which support integrated infotainment systems and which increasingly use voice activation and voice assistants to support integrated digital dashboard technologies that are able to control radio and other entertainment services and various hands-free car systems such as navigation systems.
12. The leading services within the UK car market currently are those that connect to (or mirror) phones, namely Google's Android Auto and Apple CarPlay, while Amazon also offers an Alexa-enabled in-car service; there are also some voice assistant-supported systems specific to car manufacturers (e.g. Mercedes MBUX), and third party options including Xperi's DTS AutoStage. There are two main approaches that are being used, with many car manufacturers choosing to offer hybrid arrangements that support

⁶ GFK techuk UK Connected Home report 2022

⁷ <https://www.statista.com/statistics/792604/worldwide-smart-speaker-market-share2022>.

⁸ https://www.rajar.co.uk/docs/news/RAJAR_DataRelease_InfographicQ32023.pdf

⁹ <https://www.legislation.gov.uk/ukxi/2020/818/regulation/22/made>

connectivity both with and without a connection to a mobile phone or other connected device:

Mirroring - This approach is more common and has evolved from cable connections using USB or other leads. It enables users to seamlessly connect mobile phones and other connected devices using a Bluetooth or smartphone data connection. In the past five years there has been rapid growth in the uptake of dedicated mirroring solutions (such as CarPlay and Android Auto) which work in conjunction with mobile phones and allow a seamless transition in use between the phone and car environment. Projections by Futuresource in 2020 for the Digital Radio and Audio Review¹⁰ were that more than 80% of new cars would have integrated smartphone mirroring solutions by 2023.

Full connection - There has recently been a shift to fully connected vehicles equipped with built in 4G/5G enabled for infotainment systems in part to support enhanced emergency capabilities. These systems can operate separately from the users' mobile phones and support other functions such as vehicle tracking, emergency calls and assistance and vehicle diagnostics. Futuresource projected that around 35% of all new passenger vehicles (and 10% of all cars on the road) would be connected by 2023.

13. The role of voice assistants in these systems is projected to grow rapidly given the obvious benefits of a hands free interface. Futuresource projected that close to two thirds of cars sold would have capability to support one or more voice assistants by 2023.
14. The shift of listening to connected devices in the car and the home is also expected to support the further shift of radio consumption to IP listening. In 2020, Mediatique produced forecasts for the Digital Radio and Audio Review. These forecasts projected that radio listening over all IP devices will account for between 32-40% of all radio listening by 2035, with smart speakers accounting for 22-28% of listening¹¹. However, given the rapid growth in the usage of these devices since those forecasts, these estimates appear conservative.
15. The adoption and use of connected audio devices in the home and car is a major change in UK media distribution, with access to radio and audio content increasingly moving from being free and open to listeners to being intermediated i.e. with a third party facilitating (and capable of blocking) the delivery of content from the provider to the listener. The platforms have this role in particular because the audio stream distributed via IP needs to be managed by the voice assistant which supports the connected audio device, something which the platform facilitates. To ensure that a service is available, there needs to be some form of direct relationship with the platform or an agency-type relationship with an aggregator who then manages the relationship with the platform. Unlike a website or app, when provided over a smart speaker, a radio service carried

¹⁰ <https://getdigitalradio.com/uploads/Futuresource-Audio-and-Radio-Consumption-2020.pdf>

¹¹ Mediatique, Future audio consumption in the UK (update), December 2020, p13

across a voice assistant interface is dependent on the platform and on the software and algorithms that facilitate access to that service on the particular device.

16. The way in which the voice assistant interface operates contributes to the asymmetrical relationship between the platforms and even the larger station operators. This is characterised by:
- a. the multifunctional nature of connected audio devices (including both smart speakers and in-car entertainment systems), which means that radio is no longer the default option on a device which is providing it;
 - b. the growing vertical integration of platforms and content (e.g. with Amazon devices providing access to Amazon Music); and
 - c. the absence, in the context of voice activation, of a directory or similar browsing option which would enable radio stations to bypass the need to integrate services with the platform.
17. The effect of this emerging asymmetrical relationship has been the creation - in relation to these devices - of a gateway through which UK regulated free-to-air radio services - of which there are currently more than 600 across the UK, albeit that a significant number of these are operated by the three major commercial station owners (Global, Bauer and News UK) and the BBC - must pass to continue to reach their audiences. While the transition of UK radio towards IP-based listening has so far been a generally positive experience (through opening up new routes to audio for listeners and new opportunities for content creators), the ability of the UK radio industry to thrive in the medium and long term is dependent on listeners continuing to have unimpeded free to air access to its services, and this access is potentially at risk given the absence of comparable scale between the broadcasters and the platforms, and the lack of regulatory structure around the carriage of radio when provided on smart speakers. Therefore, these stations are the main beneficiaries of this legislation, as a result of the value exchange mentioned previously.

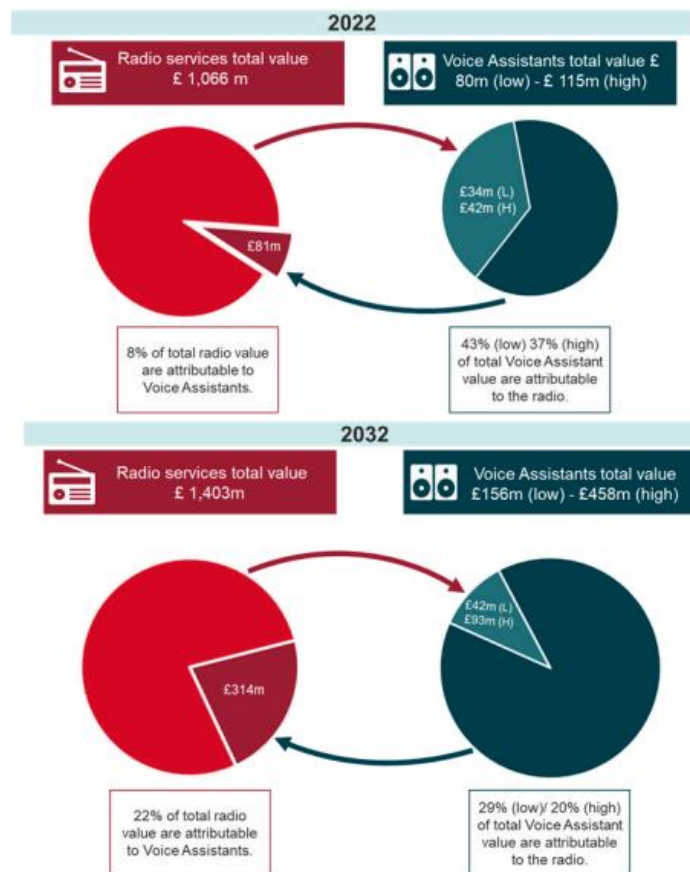
Problem under consideration

18. Like other media, radio has needed to evolve content strategies and business models to embrace the opportunities and challenges of the internet, with many station websites offering 'listen again' services, video content, programme schedules and a variety of other services alongside live streams of their broadcast content. In part as a result of this, the platforms that operate voice assistant services and radio stations are currently in a broadly symbiotic relationship.
19. However, evidence provided in the course of the Digital Radio and Audio Review (2020-2021) and subsequently makes clear that the value exchange between the two parties - which has been relatively balanced as well as mutually beneficial to date - is forecast to shift in favour of the platforms over the coming years as the share of listening carried on these devices grows¹². Frontier Economics predicts that from 2022 to 2032, the

¹² Report from Frontier Economics, 2023

percentage of total radio value that is attributable to Voice Assistants will rise from 8% to 22%. Here, radio becomes increasingly reliant on Voice Assistant platforms in order to access listeners. This suggests that radio's bargaining power is likely to reduce in the coming decade as it becomes more dependent on Voice Assistants to generate value, and radio becomes less important to Voice Assistants in growing their user base and incremental value - decreasing radio's bargaining power.

Figure 3: Counterfactual value exchange between radio and voice assistants



Source: Frontier Economics.

20. As this happens, there is likely to come a tipping point whereby radio will become dependent on the platforms for access to its listeners, which would provide the platforms with a clear economic incentive to seek to monetise the provision of radio services. Although relationships have been benign since the emergence of voice activated smart speaker devices in 2016, it is this risk - the risk that the public value inherent in continued access to live, licensed radio services will be intermediated and monetised by the platforms - that the new measures to regulate radio access across voice assistant interfaces in the draft Media Bill seek to address.
21. We fully recognise that the tipping point has probably not yet been reached. However, evidence from other sectors demonstrates how quickly and dramatically market changes can impact content providers' long-term sustainability. For example, the traditional

business models of news publishers are at risk as readers increasingly shift to digital content consumption. As a result, the sector saw revenues decline from £4.5bn to £3.7bn between 2010 and 2018. Within that total, local publishers were most affected, seeing a decline of around 37% of their revenue.¹³

Case study: News publishing industry

Advice submitted to the government by the CMA and Ofcom in 2021 concluded that news publishers have come to rely on services provided by major online platforms for the discovery of their content and for traffic directed to their websites. Google and Facebook account for 40% of traffic to large publishers.¹⁴ Where platforms act as essential gateways for news publishers, they are able to dictate the terms of their commercial relationship. Disintermediation undermines news publishers' ability to build their brand and bundle their content, presenting further challenges in monetising their content and building relationships with users.

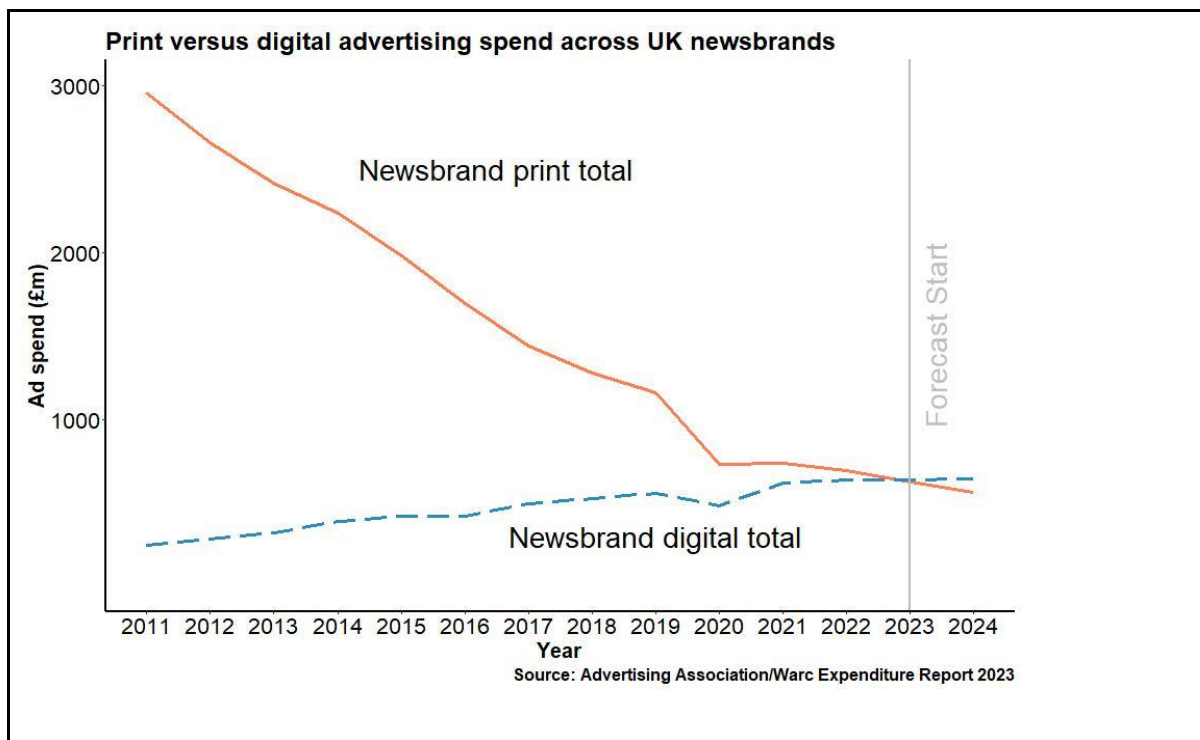
While the advice found that the problems faced by news publishers are a result of a range of factors, it also concludes that the bargaining power of dominant platforms exacerbates the broader problems they face. News publishers must compete with these platforms for users' attention online and as suppliers of digital advertising inventory - as well as often relying on platforms' intermediation services when selling advertising inventory on their own websites. While digital advertising spend with newsbrands has gradually increased from £247.1 million per year in 2011 to £634.8 million in 2022, this does not currently make up for declines of c.£2.3 billion in advertising spend in the print part of the sector over the same period.¹⁵

The impact of these dominant platforms has therefore compounded the risks to the provision of public interest journalism at local level, and the invaluable and unique role that it plays in the fabric of our society as an important merit good. However, local news is consumed at a socially suboptimal level, as positive externalities are not taken into account.

¹³ Economic Insight, Press Sector Financial Dynamics, 2021

¹⁴ Ofcom/CMA: Platforms publishers Advice, 2021.

¹⁵ Advertising Association/WARC's annual advertising expenditure reports.



22. These measures are designed to deal with similar challenges to UK radio and to protect radio broadcasters from future changes in a platform’s strategy that imposes new terms and conditions which prioritise securing value from radio stations rather than the current mutually beneficial partnership approach. Although there are generally good relationships between the platforms and radio broadcasters, it is also clear from discussions DCMS has had with radio groups in other countries, that the potential for charges on commercial radio providers is emerging as an issue of concern¹⁶.
23. There is also concern at the terms being introduced by Amazon Publishing Services internationally for carriage on their Fire TV device. Plug-in television service devices is a similar platform market to smart speakers. It is dominated by a few market players and as such those market players can dictate market terms. The terms recently imposed on TV services by Amazon were that any ad funded content provider has to provide Amazon with 30% of the “total advertising impressions in each such country. Amazon will retain 100% of the revenue from these impressions, which must be provided at no cost to Amazon and without excluding or limiting Amazon’s access to times, programs, or categories.”¹⁷. There is nothing currently preventing any voice assistant platform from imposing similar terms on radio stations.

Regulatory context

24. There is currently no regulation directly applicable in this area. In the UK, the Digital Markets, Competition and Consumer Bill is designed to support increased competition in digital markets by conferring powers and duties to regulate on the Competition and

¹⁶ Commercial Radio Australia has made representations to the ACCA raising these concerns https://www.accc.gov.au/system/files/Commercial%20Radio%20Australia_3.pdf

¹⁷ [Select Committee Q187](#)

Markets Authority (“CMA”); however, it contains no powers to secure the presence of radio within these markets in the first place.

25. The intention of the measures in the Media Bill, therefore, is to ensure that all UK radio stations remain available and accessible to listeners using connected audio devices over the coming years, while the DMCC Bill measures will ensure that if a particular platform acquires a significant and entrenched market position that results in harms to consumers and competition, the Digital Markets Unit will be able to investigate and with powers to intervene if this is appropriate.
26. The EU has adopted the Digital Markets Act (DMA), which includes powers to restrict ‘gatekeeper’ tech companies from preferencing their own audio services above those of others, and from imposing unfair terms and conditions on businesses or end users. However, the DMA will clearly not have any application to the UK market (though may influence the behaviour of Voice Assistant platforms in the UK since digital platforms may adopt common behaviours throughout Europe); it is not yet known whether or when any of the digital platforms could be designated as a gatekeeper under the EU DMA; and as with the DMCC Bill measures, there is no specific protection in place for access to the platforms operated by these companies.

Rationale for intervention

27. The risk of not intervening is that if there are insufficient protections, either through existing regulation or market systems, from market conditions that could be damaging to the radio industry by voice assistant platforms, there would be consequences for society and individuals in ways not recognised in market mechanisms.

Positive externalities - Radio provides benefits both to individuals and to society through some of its content. If radio listening were to decrease due to reduced availability of radio content, then this would undermine the social benefits that radio delivers.

28. Radio plays a vital role in providing high-quality, trusted local news and information. Radio is consistently found to be the most trusted medium in Europe - by 56% of the European population on average (and 61% of people in the UK) in 2022, compared to 49% for both TV & press¹⁸. This is in a context of declining trust in news (in 2023 33% of the public trust news, compared to 51% in 2015¹⁹).
29. There are local radio stations serving every part of the UK and community radio stations serving many different communities, contributing to the range and plurality of news media essential to any well-functioning democratic society.²⁰ Radio also provides consumers with increased choice of media content and in particular, culturally relevant media content. In a survey of community radio listeners, when asked what they valued about their community radio station, 59% said “Presenters sound like ordinary people”

¹⁸ [Eurobarometer](#)

¹⁹ [Reuters Digital News Report](#)

²⁰ [Ofcom, “Media plurality and online news”, Nov 2022.](#)

and more than a third said “it’s for people like me”²¹. Cultural relevance to under-represented groups is a key consideration in regaining trust in the news and media²².

30. It plays a vital role in public messaging - e.g. during Covid a network of ethnic commercial and community stations was successfully used to increase awareness of Government vaccine messages among communities which other media struggles to reach. Also, since 2018, stations across the UK (and every licensed station in the country since 2021) have come together every year to broadcast the Mental Health Minute, a unique, one-minute message on the importance of talking about mental health issues, reaching out, and listening to each other.
31. The BBC represents 43.8%²³ of radio listening, carrying a broad range of public service content with the purpose of: providing impartial news and information to help people understand and engage with the world around them, to support learning for people of all ages and to reflect, represent and serve the diverse communities of all of the United Kingdom’s nations and regions²⁴.
32. Radio is an integral part of the UK creative economy - with a particular contribution to the UK’s music industry through driving sales and through music rights payments, estimated at £103m and £50m respectively as of 2016²⁵. A survey found that radio listeners discovered on average 8 new artists through radio listening a year²⁶.
33. Absent regulation, it is likely that radio listening could decline, particularly listening to radio stations that are more difficult to access. If radio broadcasters were unable to access audiences on these platforms, this would reduce the value of radio to advertisers. In our engagement with the radio sector, radio stations suggested that these costs would be substantial enough to threaten the sustainability of UK radio broadcasters, limiting its ability to deliver social benefits.
34. Furthermore, in a situation where voice assistant platforms overlay advertising or charge for access, it is also possible that stations may focus on more commercially attractive programming rather than the programming that delivers the highest social benefits, in order to increase their audience size, and therefore increase commercial revenues, undermining the social value of radio. This could be similar to experiences in the press sector, where news publishers must compete for users’ attention online.

Equity - radio is disproportionately important for smaller communities and vulnerable people, therefore worth protecting.

35. Radio is especially important to minority communities compared to other UK media, e.g. through Asian commercial groups such as Sunrise, Panjab and Lyca whose local

²¹ [Community Radio Listener Research Feb 2021](#)

²² [Reuters Institute Trust Research Programme](#)

²³ [RAJAR Listening Figures for period ending September 2023](#)

²⁴ [BBC Public Purposes](#)

²⁵ [Oxford Economics](#)

²⁶ [Pure Radio](#)

services collectively reach around 400k people every week²⁷. Around 40 community stations are targeted at ethnic minority communities.²⁸

36. Radio listening is also important for older listeners (65+ listeners) who are more likely to listen to BBC, commercial or community stations on a regular basis and more likely to listen for longer compared to other age groups²⁹. There are particular benefits in terms of loneliness. Approximately 3 million people in England (6%) feel lonely often or always (i.e. are chronically lonely). Furthermore, people living with long-term illness or disability were more likely to say they felt lonely often/always than those without (13%, compared with 3%) and less likely to say they never felt lonely.³⁰ Survey evidence shows that 1 in 4 Brits (25%) say they listen to radio stations (DAB and satellite) that they know when feeling lonely – just for the familiarity of the voice they’re listening to. More than a third of people put on the radio as background noise, to use as a coping mechanism when feeling lonely³¹. Radio is also important to those with impaired sight - 93% of blind and partially-sighted people listen to the radio³².
37. In some areas of the UK, the absence of a local newspaper means that BBC or commercial radio may be listeners’ only source of regular local news.
38. Without the protections for radio stations as set out in the Media Bill, there is a significant risk that the platforms may prioritise alternative, revenue-maximising services over the provision of radio, or will undermine radio’s ability to monetise its content (for example through the overselling of advertising, or by requiring a share of advertising revenue as a condition of facilitating access), with the result that some stations may have to close and that the many of the social benefits delivered by the wide diversity of UK radio will be lost. This is likely to disproportionately affect smaller, more niche stations with less commercial appeal.

Market power - there is no mechanism for BBC and licensed radio stations to secure carriage or protect services carried on voice assistant platforms

39. The structure of the market for voice assistant platforms is such that there are relatively few firms dominating. Amongst adults with smart speakers in the UK, estimates from Kantar suggest that 75% have an Amazon Echo brand, 15% have Google Nest and 8% have an Apple HomePod³³. This is similar to the US, where it is estimated that Amazon has 70% of the smart speaker market, followed by Google with 25% and Apple with

²⁷ [Rajar Listening figures for period ending September 2023](#)

²⁸ [Audience estimates for community radio stations April 2021](#)

²⁹ According to Rajar Q3 2023 reach for 65+ age group is 90.3% of 65+ (compared to 88% for all age groups) and average hours per listener for the 65+ age group is 25.8 hours (compared to 20.5 hours for all age groups)

³⁰ [DCMS Community Life Survey 2021/22: Wellbeing and Loneliness](#)

³¹ [Pure Radio Feb 2021](#)

³² “Digital Radio and Audio Review”, Accessed Feb 2023-

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1079580/Digital_Radio_and_Audio_Review_FINAL_REPORT_single_view.pdf

³³ <https://kantar.turtl.co/story/global-smart-speaker-trends/page/4/1?teaser=true>

5%³⁴. These three brands therefore account for 98% of the smart speaker market in the UK, and so have the ability to control the distribution of radio through smart speakers.

40. With a shift in bargaining power with radio stations as modelled in economic analysis reviewed for this assessment, the small number of firms operating will be able to set market conditions on increasingly favourable terms. In a functioning market terms offered by other players would create more favourable options but with so few players that becomes less likely. While these measures will not address the relative market power that large voice assistant platforms have, the measures seek to fix market terms to protect a merit good.

Comparison to other technology transitions

The introduction of DAB digital radio in the mid-to-late 1990s enabled the BBC and commercial radio to develop a broader range of radio services to attract and retain listeners using a more modern technology. However, the development of DAB used a broadcast distribution mechanism developed by the radio industry and its third party suppliers with payments based on a share of carriage costs. This approach did not enable third parties to mediate content or secure a share of listening or a proportion of revenues. As with analogue radio, DAB radios were produced by device manufacturers working to common technical standards and allowing for a variety of companies to enter and leave the market or to specialise on certain aspects of the markets (such as in-car radios).

The development of internet radio, which also began in the late 1990s, has also benefited radio by allowing radio stations to reach new audiences particularly at times of the day when radio listening was impractical (such as when travelling or at work). Radio stations allowed their internet streams to be accessed by users either via websites or through apps developed by stations or via third party aggregators.

Faced with competition with other forms of online audio, stations have taken this a step further over the past five years by developing players (such as BBC Sounds and Global Player) which create a one-stop mechanism (downloaded as an app) that enables listeners to access a range of radio services and on-demand content, and (through user sign ups) are able to help personalise the experience including through the targeting of advertising. Unlike DAB, radio streams are distributed via the internet and are dependent on fixed or mobile networks and internet service providers to maintain access to services. This access is regulated by the general conditions that apply to providers of electronic communication networks and services under Part 2 of the Communications Act 2003.

The emergence of smart speakers differs from previous changes - including internet radio - in that platforms are able to control access to content which is managed by the voice assistant. Like internet radio, stations will need to develop or acquire the specific functionality to connect with listeners using smart speakers to access radio services. However, radio stations are not able to facilitate this arrangement without an integration

³⁴ <https://www.fortunebusinessinsights.com/smart-speaker-market-106297>

with the platform and the terms of that integration - whether done by the platform or by a third party - are set by the platforms.

Barriers to entry for other firms in the voice assistant platform market

41. As consumption on voice assistant platforms increases, higher revenue gains could attract more players to this market, creating the competition that could enable radio stations and aggregators to negotiate better terms with the platforms. However, in this case there are high barriers to entry preventing new entrants to the market.

42. A primary barrier to entry is that these platforms are part of much larger, diverse global corporations, which are well-established not only in the voice-assistant platform market, but across a number of complementary markets. This means that consumers are likely to buy a smart speaker (for example) because they are able to link it to other products and services offered by these corporations. For example, an Alexa-enabled smart speaker allows consumers to buy groceries from Amazon.com, and a Google Nest allows consumers to use other Google services that are integrated into the platform.

43. These platforms bring together different user groups, allowing users to access content and services including audio content, and they enable content and service providers to access listeners, making this a “multi sided market”, as it simultaneously provides services to two or more categories of users. Therefore, as more users are attracted to a platform, this increases demand from service providers to interoperate with that platform in order to access users, in turn making the platform more valuable to end users. Large corporations already have an established presence in this market and networks that bring users and providers together, so they are better able to take advantage of this market structure.

44. Furthermore, it is likely that the providers with a larger number of end users are better able to develop their services, as the greater volume of user commands will enable more accurate interpretation and responses, meaning there is a degree of network effects. These network effects for voice assistant platforms are enhanced by other investments by the platforms in machine learning and artificial intelligence and the existing platforms appear well placed to maintain their position as AI technologies improve.

45. There are also significant costs to create and maintain the physical infrastructure required: hardware and cloud computing. Existing platforms have the ability to use existing cloud computing infrastructure. For example, both Amazon and Google also own the underlying cloud infrastructure, Amazon Web Services (AWS) and Google Cloud Platform (GCP) respectively. Market participants note that advancements in voice assistant ecosystems are also increasingly edge computing technology, which brings the computation and data storage closer to the device and is a technology in which the incumbent cloud market leaders have a head-start.

46. The in-car market has additional barriers to optimise interoperability of voice assist technology and how that integrates with cars. The commercial arrangements around that have to be negotiated with car manufacturers.

47. Furthermore, there is likely to be a degree of consumer loyalty either to the brand or due to the difficulty many users will have in being able to switch between platforms on a single device. If a consumer already has an Amazon Prime subscription, for example, they are much more likely to purchase an Alexa than a Nest or a HomePod, due to the integration of other Amazon services in the device. There have been efforts by the platforms, notably Amazon, to improve interoperability. However, all voice assistant technology is designed to learn its user's preferences over time and as it improves its "understanding" of its user, it may increase the costs associated with switching to another platform. The design of most voice assistants—specifically on screenless devices—will tend to amplify this effect.

Potential unfavourable market conditions

48. If the bargaining power does tip (as it is forecast to), radio stations may then either:

- Face disruption to services from system outages that may be less of a priority for the platform to rectify. Commercial Radio Australia raised concerns about such an incident in April 2023³⁵;
- Be deprioritised in voice request responses (potentially in favour of the platforms' audio - this could be, for example, through platforms describing their own curated playlists as 'radio' and then directing listeners to that content in response to a request for, say, 'jazz radio'; or by suggesting their own content as alternatives in response to requests for radio stations);
- Remain present, but at a significant economic cost (either directly, such as through having to pay a proportion of its revenue to the platform in exchange for the delivery of its service, or indirectly, for example through platforms interrupting station streams to provide their own advertising) - as in the examples of the local news market and Amazon's changes to its terms for its Fire TV service;
- Be removed from the platforms - again potentially in favour of the platforms' own audio services, which can be directly monetised - unless they are willing to pay charges for accessibility or higher prominence.

49. The impact of any of the above would be to place broadcasters' ability to reach their audiences on smart speakers at risk.

Policy Objective

50. As touched on above, these measures are being put in place at a crucial period within the UK radio market, following Covid-19 and the major disruption to advertising markets when the trend of listening towards online has become clear, but before the balance of power within the relationship between radio and the platforms has tipped definitively in favour of the latter.

³⁵ [Commercial Radio Australia - Press Release 14 April 2023](#)

51. As such, the intended outcome of intervention is that the behaviours of both the platforms and radio stations will remain largely as they currently are - mutually beneficial relationships allowing listeners to access licensed radio services on request, but enabling commercial deals to be agreed in relation to other content and other services. Therefore, the main policy objective is essentially to ensure that:
- commercial and community radio revenues are not detrimentally impacted by interoperating with voice assistant platforms; and
 - overall radio listening levels are maintained at broadly current levels.
52. The measures included in this legislation are relatively narrow in focus and will apply only to the largest platforms that are designated by the Secretary of State following advice by Ofcom. The measures do not seek to undermine mutually beneficial commercial arrangements for other services beyond live, licensed content, but rather to ensure the continuation of the wide availability to the public of radio content that has been an essential feature of radio broadcasting in the UK.
53. The success of these measures will be measured with reference to published radio industry data including on metrics such as overall listening (which has remained consistent for a number of years, with radio reaching around 88 to 90% of the population each week, and average weekly listening in the region of 20 hours) and total advertising revenue (where relevant), as well as the number and variety of BBC, commercial and community stations which are still broadcasting over the coming years. However, it should be noted that these metrics will be subject to many other factors, including the continuing trend away from analogue (AM/FM radio listening) and the impact of other work (touched on below) currently ongoing within government in relation to digital markets, and our future evaluation of the impact of these measures will look at this in more detail, including in relation to the interactions between each intervention.

Description of options considered

54. There are a number of potential approaches which could be followed in relation to the issues identified above. In particular, we have considered whether non-legislative intervention could provide effective means of securing mutually beneficial relationships between radio and the platforms over the coming years. Specifically, this would entail encouraging some form of agreement or non-binding code of practice between platforms and radio stations as to the behaviours which they should adopt in relation to the provision of radio services.
55. However, such an approach is not, in our view, realistic. Any agreement reached would - in all probability - have to be negotiated on a platform by platform basis and, in the absence of any statutory or regulatory underpinning, would be difficult for stations to enforce; it would risk being imbalanced given the relative power of the platforms and the stations; and the market power held by a few firms in the platform market limits the likelihood of success of brokering and enforcing a voluntary agreement. Additionally, taking into account that the platforms would have limited incentives to enter into an agreement and the rapid increase in the proportion of IP listening, increasing platforms'

bargaining power, there is a significant risk that by the time that any agreement might be reached, the behaviours which this regulation is intended to prevent may already have manifested themselves.

56. Alternatively, following the recommendations of the Digital Radio and Audio Review report (published in October 2021) in full would involve extensive intervention within this Bill, with measures addressing matters including data sharing, ensuring transparency of algorithms and safeguards against self-preferencing (i.e. the platforms taking actions to prioritise their own audio services in response to listener requests). However, these issues are cross-sectoral rather than radio-specific, and are therefore more appropriately addressed through the new digital market regulation structures that will be introduced by the Digital Markets, Competition and Consumer Bill and related work.
57. The **do nothing** option would involve taking no action to secure radio's position on voice-activated connected audio devices. Other work currently ongoing within government in relation to the Digital Markets, Competition and Consumer Bill may help to protect radio stations from anti-competitive behaviour by the platforms in the longer term, but will not secure those stations' access to listeners via the platforms in the first place, which - as covered above - is at risk as the balance of power shifts in favour of the platforms. As such, the measures in this Bill serve a different purpose, namely ensuring that radio remains present on the voice-activated connected audio devices which represent a growing share of its listening market - which the work relating to wider sector-agnostic competition issues (including the provisions in the Digital Markets, Competition and Consumer Bill, as well as the EU's Digital Markets Act (to the extent that the provisions of that legislation will affect the operations of the tech platforms in the UK)) is not designed to, and will not, address.
58. **Option 1** involves targeted legislative provisions to secure radio's access to listeners through connected audio devices. The measures proposed would ensure that radio is available to and findable by listeners, that it is received in the form in which it is provided (i.e. without content such as advertising being overlaid by the platforms), and that stations can within reason nominate the route through which they are provided. This is our preferred option - the pace of change in IP radio listening and the pace at which harm was inflicted on other markets (as covered above) indicates that specific intervention is required in this market and to address this problem.

Summary and preferred option with description of implementation plan

59. Our preferred option is **Option 1**: primary legislation to underpin the free access of live, licensed UK radio services to the platforms, and their findability by listeners on request. In particular, this legislation includes the following ex ante requirements which would apply to providers of 'designated radio selection services' (i.e. of software with voice assistant capability which is used by a significant number of listeners to access the online streams of BBC and Ofcom-licensed commercial and community UK radio stations):

'Must facilitate'	Ensure that all BBC and Ofcom-licensed commercial and
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	community UK radio stations that have notified Ofcom that they want to be made available to listeners via these designated radio selection services (DRSS) are indeed made available
'No cost access'	Prevent providers of DRSS from levying charges on stations in relation to the provision of their licensed services via the DRSS
'Findability'	Ensure that listeners are provided with their requested station in response to a clear request for that station
'Integrity of service'	Prevent providers of DRSS from inserting or overlaying their own content (e.g. advertising) into radio station streams
'Default route'	Ensure that listeners are provided with their requested station via the station's preferred aggregator (e.g. BBC Sounds / Global Player / TuneIn / Radioplayer), unless the listener has specifically requested an alternative route or the preferred route is unreasonable for the DRSS to implement.

60. The intended effect of these measures is to ensure that, as more listening on radio takes place over connected audio devices (such as smart speakers) over the coming years and the value exchange shifts increasingly in favour of the platforms, those platforms are unable to use that power either to prevent listeners from accessing live radio, or to take a share of radio's revenues in exchange for ensuring that access, putting the sector - and the huge public value which it provides - at risk. It will not, however, prevent stations and platforms from agreeing commercial deals in relation to the wider services that both parties provide (such as Magic's collaboration with On The Beach to run a competition on Amazon Alexa-enabled devices for a chance for listeners to win a holiday).
61. The regime will be enforced by Ofcom, who will consult on a detailed code of practice which will set out detailed guidance on how to meet the operational requirements of the measures (such as how effective findability of stations can be secured and what actions are needed to meet the default route requirements).

2.0 Costs and Benefits

Option 0: *Do nothing* We do not intervene to address the current and future harms presented by smart speakers on the radio sector.

Option 1: (*preferred*) Primary legislation to underpin the free access of live, licensed UK radio services to the platforms, and their findability by listeners on request.

Full descriptions of the options are included in section 1. This section also includes detail of the measures underpinning Option 1.

Who is impacted?

Voice assistant platforms:

62. As defined previously, the measures are targeted at voice assistant platforms that operate software that interprets, analyses and responds to natural language commands from users by offering access to content services information stored in the cloud. Voice assistants are integrated into many different types of consumer devices where users can interact using voice commands. For the purposes of this analysis, we focus on the use of voice assistant platforms in smart speakers and in-car infotainment systems as two of the largest components of this market. However, the value exchange described below takes a more wide-reaching definition, as set out above and in the research we are drawing from.
63. The UK market for smart speakers is dominated by three large US-owned providers operating in the UK: Amazon, Google and Apple³⁶. Between them, they support more than 95% of voice-activated smart speakers - the current leading brand-integrated devices being the Echo, Nest and HomePod respectively - and the major in-car integrations. While designation of a given platform will be a matter on which Ofcom will need to advise, these three organisations (from the platform perspective) are the likeliest to be affected by the legislation and are expected to incur costs from the partial value exchange away from smart speaker platforms towards radio stations which would result from these measures.
64. However, other organisations may come into scope in the event that they become significant players in the provision of radio across voice-activated devices. This could include car manufacturers (known as original equipment manufacturers or OEMs) who choose to integrate voice assistants into car infotainment systems using “in house” or “white label” systems supplied by companies such as Faurecia Aptitude Automotive or Harman/Samsung rather than directly integrating products developed by Apple, Google or Amazon. However, the requirements would only apply in the event that an individual OEM had a significant number of radio listeners using the voice interface software to access radio stations (as compared to traditional broadcast radio use) to warrant a designation as a designated radio selection service. The regime may also potentially cover TV platforms that have voice assistants where their service conveys radio -

³⁶ https://www.ofcom.org.uk/assets/pdf_file/0016/262510/technology-tracker-2023-data-tables.pdf

however, given that radio listening on TVs is declining we believe this is very unlikely without a significant change to the market and listener behaviour.

65. The requirement may also cover new entrants providing voice assistant services to the UK. This could be new voice assistant systems developed using new AI technologies (for example ChatGPT) which emerge and which secure a significant share of total radio listening, or existing systems which are developed by suppliers operating in other markets - for example, Chinese suppliers Alibaba, Baidu and Xiaomi, who account for around 30% of smart speaker sales internationally.
66. The provisions will not directly impact on equipment manufacturers who include voice assistant technology provided by an existing provider (or offer a choice of voice assistant integration from different suppliers). The provisions will also not directly affect the services or business of audio aggregators (such as existing providers such as TuneIn or Radioplayer) which facilitate radio's access to the platforms.
67. The costs and benefits detailed below will apply only to voice assistant platforms that are judged to be used by a significant number of members of the public in the UK, in accordance with designation at secondary legislation stage and following a review by Ofcom and advice to the Secretary of State.
68. The main costs will be:
- **Possible opportunity costs** - in the form of future revenues or value from radio providers due to the measures reversing the value exchange
 - **Familiarisation costs** - covering the legislation and regulations which arise from a decision by the Secretary of State to designate a voice assistant service as a designated radio selection service
 - **Reporting costs** - which relate to costs of dealing with Ofcom as a result of the designation
 - **Implementation costs** - this includes the costs of developing new systems for integrating radio services though Amazon already has such a service (Amazon Radio Skills Kit) and Google has operated such a service in the past
69. The main cost to platforms is likely to be the extent of reversal of the value exchange from radio towards smart speaker platforms (described in the counterfactual) and the opportunity cost that arises from limiting future monetisation options. The effect of this is limited by the fact that formal protections under the measure only apply to services provided by the BBC or UK licensed radio services and that on unlicensed radio services (e.g internet-only radio stations) and other forms of audio content (e.g. podcasts) would fall outside the scope of these measures. The scale of the impact will depend on how platforms respond to the shift in bargaining power. The transfer depends on incremental revenue, as detailed in above, assuming a "benign" scenario. It will be a proportion of the total value generated by voice assistant platforms that can be attributed to radio absent regulation. This is estimated to be between £36,900,000 and £142,559,000 per annum.

Radio stations

70. Conversely, the radio sector is made up of a large number of stations of various sizes.

To illustrate, Radiocentre - the industry body for commercial radio - has more than 50 members, who operate more than 300 analogue and digital radio stations across the UK. These include a range of station groups, as detailed in Table 1.³⁷

Table 1: Radio stations by size

	Number of groups	Number of stations
Large station groups	3	170
Medium sized station groups	9	64
Small station groups and Independent stations	33	

71. There are around 319 analogue community stations operating in the UK.³⁸ Community radio stations are typically very small, and they are funded through a combination of commercial revenues, grants, donations, and other revenue sources. Community radio has much lower revenues than commercial radio - around 2% of the size of commercial radio in 2022.

72. There are also some public sector radio stations. BBC radio stations make up a little under half of all UK radio listening hours in the UK. Although these stations are not funded via advertising revenue, they will also stand to benefit from the provisions in this legislation. In particular, through continued no cost access to listeners via voice assistant platforms.

73. The main costs will be:

- **Familiarisation costs** - associated with the reading and understanding of Ofcom's guidance.

74. The benefits will be:

- **Reversal of a proportion of the value transfer** - protecting a share of radio revenues earned through listening on voice assistant platforms.
- **Ensuring availability of radio stations** - maintaining and perhaps improving listener experience on voice assistant platforms, increasing listening and therefore potential revenues.

³⁷ This analysis draws from Ofcom's list of analogue radio stations. It does not directly compare the number of digital stations. Furthermore, there is no set definition for small and medium station groups. This assumption is an estimate based on anecdotal sector knowledge using Ofcom data. There is no dataset available to confirm this. These station groups are still likely to be classified as small businesses in terms of employees and revenue.

³⁸ Ofcom: [Media Nations \(2022\)](#)

75. The main benefit to radio stations will be from the partial reversal of the value exchange from radio towards smart speaker platforms. There are currently more than 600 Ofcom regulated free-to-air radio services in the UK. The scale of the benefit will depend on the behaviour of platforms, as outlined above, and on the speed of technology adoption or other market changes. Any transfer of value would be a proportion of the value generated by radio that can be attributed to voice assistant platforms, estimated to be £314 million by 2032. This is presented in the analysis as a transfer of value, rather than a benefit to radio stations and equal cost to voice assistant platforms.
76. These regulations also intend to reduce the risk of smart speaker platforms seeking to capture some of the value currently generated by radio (i.e. a “non-benign outcome” for radio).

Consumers

77. There will be benefits to consumers through this regulation. The main benefit to consumers is through increased consumer choice and easier access to radio. By making radio stations easier to access, consumers are better able to listen to their chosen stations, including niche community stations which might otherwise be difficult to find on a voice activated platform. The regulation will also protect the existing social benefits from radio as more listeners choose to use voice assistant platforms as their main method of accessing radio content. This can have further wellbeing benefits through decreased loneliness. These benefits have not been monetised.
78. There is a potential cost to consumers if this regulation has the unintended effect of reducing the number of voice assistant platforms that enter the market, reducing consumer choice. However, as barriers to entry in the market are high, we expect this cost will be negligible. This is explained further in the Competition Test, below.

Ofcom

79. Ofcom will incur both set-up costs and operational costs as a result of developing the new radio selection services regime and associated guidance. Ofcom have provided early estimates of these costs, which are included later in the document. Ofcom note that the information and figures provided below are intended to be regarded as estimates only.
80. Ofcom has not undertaken a comprehensive assessment of the required resources as the final scope of the new regulations and the extent of Ofcom’s regulatory duties are still to be determined. In particular:
- The estimate for ongoing enforcement costs will depend upon the number of complaints received by Ofcom, and the processes adopted by radio selection services and internet radio services, which cannot be predicted with any degree of certainty.
 - The workload to set up the regime, as well as the ongoing costs of enforcement, will depend upon the finalised scope of the regime, which will be clear when the Bill receives Royal Assent.
 - The estimates do not include any contingency (i.e. nil provision made for optimism bias).

81. A full summary of the costs and benefits of the intervention option can be found at the beginning of the analysis for that option. The table below summarises the cost benefit framework that has been used for this analysis.

Table 2: Cost Benefit Framework

Direct impacts on business are marked with an asterisk (*).

	Costs	Benefits
Businesses	Familiarisation costs* Implementation costs* Additional reporting costs* Ofcom fees* Value transfer*	Value transfer*
Consumers		Increased consumer choice and easier access Decreased loneliness Other wellbeing and societal benefits
Public sector	Set up costs for Ofcom Monitoring and enforcement costs for Ofcom	

Rationale and evidence to justify the level of analysis used in the IA

82. This Impact Assessment aligns with Scenario 2 in the RPC's guidance on primary legislation, in line with the approach taken for assessing the impact of the Media Bill.³⁹ DCMS has provided an indication of the likely scale of impacts, but is unable to provide a robust assessment for validation due to the fact that some of the details of the policy, including designation of platforms, will be set out following advice from Ofcom, and as a result of the uncertainty around timelines for compliance.

83. The Bill sets out a principles-based approach to regulation, with further steps to follow before platforms will be designated. The specific actions that platforms can take will be set out in future secondary legislation and Ofcom's code of practice, including detailed guidance on how to meet the operational requirements of the measures. This assessment includes a number of indicative estimates of costs and benefits, based on research by Frontier Economics, commissioned by Radiocentre, and by stakeholder engagement with radio stations, platforms and Ofcom.

84. There is too much uncertainty over the impacts of the proposal to provide a meaningful EANDCB (Equivalent Annual Direct Net Cost to Business) figure for validation at this stage. This uncertainty is largely due to the fact that many details of the policy are to be

³⁹ [RPC case histories](#) – primary legislation IAs, August 2019

set, or advised on, by Ofcom at a future date. This includes the detail of which platforms will be designated, and the steps that platforms can take. While it is not possible at this stage to provide a fully monetised appraisal of the policy or a verifiable assessment of the EANDCB, every effort is made to provide an indication of the likely scale of impact of the whole policy through presenting illustrative monetised costs, and comprehensive qualitative analysis.

85. There is a high degree of uncertainty about the actions that platforms will take in the future. In this analysis, we will set out the counterfactual value exchange as a potential range, subject to the incremental value that voice assistant platforms earn from complementary services, in order to capture this uncertainty. There is also uncertainty around the behaviours of platforms towards radio stations. These are not monetised, but there is indicative narrative throughout the analysis explaining how alternative scenarios could compare to the monetised values we have set out.
86. DCMS is intervening both to correct current issues that are affecting the radio sector, but also to prevent future issues from arising that would harm the future of the UK's radio sector and wider media plurality. Therefore, the impacts of regulation will be assessed against this counterfactual, acknowledging that there is uncertainty over the monetisation strategies that platforms may choose to pursue in response to the scenario that materialises and the relative bargaining power of radio stations and voice assistant platforms (detailed below).

Option 0 – Counterfactual/Do Nothing

87. The do nothing option would involve taking no specific steps to secure radio's position on voice-activated connected audio devices. Other work currently ongoing within government in relation to the Digital Markets, Competition and Consumer Bill may help to protect radio stations from anti-competitive behaviour by the platforms, but will not secure those stations' access to listeners via the platforms in the first place, which - as covered above - is at risk as the balance of power shifts in favour of the platforms.

How voice assistant platforms are currently regulated in this market

88. There is currently no "ex-ante" regulation that applies to the interoperability between voice assistants and radio in the UK. We have considered, with Ofcom, whether interference with radio streams by voice assistant platforms might be covered by Part 2 of the Communications Act 2003 which regulates electronic communications networks and services but have concluded that the operation of voice interfaces are not within scope of these requirements. However, legislation on the operation of digital markets in the UK and Europe may affect outcomes in coming years. The EU has adopted the Digital Markets Act (DMA), which includes measures applied to voice assistant providers which are specifically designated as 'gatekeepers'. While the DMA will not apply to the UK, it is possible that it will influence the behaviour of Voice Assistant platforms in the UK since digital platforms may adopt common behaviours throughout Europe. It is not yet known whether or when any of the digital platforms could be designated as a gatekeeper.

89. In the UK, the government has introduced the Digital Markets, Competition and Consumer Bill. The Bill will include new measures to enable Digital Markets Unit to undertake investigations and impose ex-ante remedies on firms considered to have Strategic Market Status. This could include setting requirements for voice assistants, depending on designation decisions. However, it will not secure the presence of radio on voice-activated devices in the first place.
90. The following narrative describes a counterfactual where no regulations are put in place, along with a description of the expected costs and benefits arising from this scenario. There are no monetisable costs and benefits of the 'do nothing' option. Instead, we set out the current bargaining power between radio stations and voice assistant platforms, and an assessment of how this could change over the next 10 years, building on research commissioned by Radiocentre. This assumption is conservative. It is appropriate because there is no guarantee that the DMCC Bill will secure the presence of radio on voice-activated devices.
91. There is a high degree of uncertainty in this analysis, as it outlines four potential counterfactual scenarios based on platform behaviour. These are described in detail below. There is a potential range of values that the counterfactual value exchange could take, subject to the incremental value that voice assistant platforms could earn from complementary services. These are the values against which the value transfer potential of the intervention option will be compared.

Costs and Benefits

Current state of the market

92. Currently, the process of interoperability between voice assistant platforms and radio providers is generally conducted on a no-fee basis with some commercial agreements that focus on non-radio content or other services⁴⁰. This means that each party bears its own costs in the process of technically interoperating and there is no exchange or licensing fee provided on either side. In the absence of regulations, the status quo benefits voice assistants and radio stations. However, as bargaining dynamics shift, there is a risk that voice assistant platforms may seek to capture some of the value currently generated by radio.
93. The counterfactual for this analysis is the value exchange between radio stations and voice assistant platforms that is likely to occur if the government does not intervene in the market. This value exchange consists of two parts: the value added by radio to voice assistant platforms from the provision of radio services on a no-fee basis, and the value added by voice assistant platforms to radio. These values are determined by shifting trends in radio listening; the role that radio plays in generating value for voice assistant platforms; and the relative bargaining dynamics between radio broadcasters and voice assistant platforms, including how this is expected to change over the coming decade.

⁴⁰ A good example is the recent joint campaign between Heart and Amazon.
<https://radiotoday.co.uk/2022/09/global-teams-up-with-amazon-for-heart-and-alexa-ad-campaign/>

94. There appear to be four factors that determine bargaining outcomes:
- a. The balance of value that radio and voice assistant platforms provide each other;
 - b. The bargaining dynamics, which are related to the negotiating power that would affect the relationship between radio broadcasters and the voice assistant platforms;
 - c. The commercial strategies of connected platforms⁴¹;
 - d. The types of behaviours of connected platforms.
95. Currently, both parties generate gains from trade from interoperating, and the contribution that each party makes to its counterparty's value can be used as a measure of their relative bargaining power. These bargaining dynamics are likely to change over time due to shifting trends in the market, affecting bargaining outcomes, and therefore the value exchange.
96. Bargaining outcomes are also determined by shifting trends in radio listening, and the role that radio plays in generating value for voice assistant platforms. To date, the rapid proliferation of smart speakers has benefited radio by offering a different medium to receive radio, maintaining the reach of its services and the volume of listening. However, it is also increasing radio's dependence on smart speakers, as radio listening shifts from broadcast to IP distribution. Current data and modelling analysis suggests this shift is happening at a rapid pace and it is gaining momentum, with the share of live radio that is listened to over IP more than doubling from 11% in 2019 to 24% in 2023, and 14% of radio listening now via a smart speaker.⁴² Forecasts by Mediatique in 2019⁴³ and updated in 2020⁴⁴ on the share of radio listening via IP are already out of date, as shown in the figure below. IP's share of radio listening was previously forecast to reach 24% by 2026 (in the 2020 forecast) and beyond 2028 (in the 2019 forecast). Radio will also likely play a declining role in supporting the take up and use of voice assistant platforms.

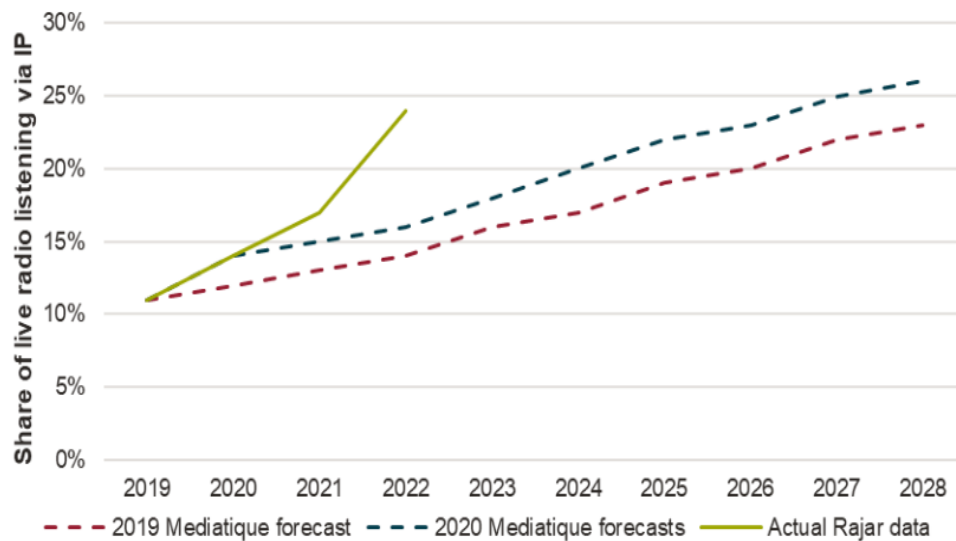
⁴¹ The commercial strategies of radio broadcasters will also affect the bargaining outcome. However, this was excluded in the research to simplify the analysis, as it is the platform that has this 'gatekeeper' role.

⁴² [Rajar listening figures for Q3 2023](#)

⁴³ Mediatique, "Future audio consumption in the UK", 2019- <https://getdigitalradio.com/wp-content/uploads/2021/10/MediatiqueFuture-Audio-Consumption-in-the-UK-update-Dec-2020.pdf>

⁴⁴ Mediatique, "Future audio consumption in the UK", 2020- <https://getdigitalradio.com/wp-content/uploads/2021/10/MediatiqueFuture-Audio-Consumption-in-the-UK-update-Dec-2020.pdf>

Figure 4: Growth in IP listening exceeds recent forecasts



Source: Frontier Economics (2023), using Rajar and Mediatique data.

97. As previously discussed, voice assistant platforms as new services have benefited from the presence of radio, as it has increased the penetration and use of smart speakers amongst users. 70% of audio listening hours on smart speaker devices is to radio⁴⁵, and 63% of smart speaker owners use smart speakers to listen to live radio.⁴⁶ Furthermore, radio stations regularly issue “calls to action” to remind listeners that their services are available and to explain how to use voice assistants to access their chosen radio station. However, there is a risk that over time, the value of radio to voice assistant platforms will decline as new content and services that use voice assistants are developed, reducing radio’s initial role as an “anchor” service.

Uncertainty about future bargaining power

98. As the Digital Radio and Audio Review report observed, the share of value added to voice assistant platforms by radio is likely to decline over time, while voice assistant platforms will become an increasingly important distribution channel for radio. As a result, bargaining dynamics are likely to shift at some point in the near future, creating a material risk that radio will have a significantly weaker bargaining position in relation to the voice assistant platforms with which it must interoperate to reach listeners. A further weakening in radio’s bargaining position could harm radio’s ability to be able to agree to nil cost terms of access and technical integration that are necessary to be able to offer audio content and advertising services.

99. Over the coming decade, bargaining outcomes are likely to result in a shift in the value exchange between radio and voice assistant platforms. This exchange is presented as a range of values because there is uncertainty around the ability of voice assistant

⁴⁵ [Rajar MIDAS Survey, Spring 2023.](#)

⁴⁶ [Rajar, “Rajar Data Release Quarter 3, 2023”](#)

platforms to monetise their investments in complementary products and services, and bargaining dynamics are dependent on this monetisation decision. These dynamics are also subject to future technical changes and the possible emergence of new entrants to the UK market. Therefore, two scenarios are used: one assuming that voice assistant platforms earn relatively low incremental value from other complementary services⁴⁷; and an alternative where they earn relatively high incremental value from complementary services.

100. This is a key uncertainty in how the voice assistant market will develop over the coming decade. The value share estimates below are based on a continuation of the status quo (i.e. a “benign outcome” for radio). However, there is a risk that if bargaining outcomes move in favour of digital platforms, then these platforms may seek to capture some of the value currently generated by radio (i.e. a “non-benign outcome” for radio). A summary of potential outcomes is detailed in Figure 5, below.

Table 3: Description of future scenarios

Scenario	Description
Low incremental value of complementary services	Voice assistant platforms earn relatively low incremental value from other complementary services
High incremental value of complementary services	Voice assistant platforms earn relatively high incremental value from other complementary services
Benign (for radio)	Bargaining outcomes move in favour of digital platforms. However, digital platforms do not seek to increase value at the expense of radio, so there is no additional transfer in value from the status quo.
Non-benign (for radio)	Bargaining outcomes move in favour of digital platforms. As a result, digital platforms seek to capture some of the value currently generated by radio.

⁴⁷ These can include complementary subscription services, such as a digital platform’s music streaming services and other services such as Amazon Prime (in the case of the Echo).

Figure 5: conditions for a benign and non-benign outcome for radio

	Low Incremental Revenue Scenario [for Voice Assistants]	High Incremental Revenue Scenario [for Voice Assistants]
Benign [for radio]	<ul style="list-style-type: none"> Radio is an important driver of Voice Assistant take-up and Voice Assistant platforms heavily rely on radio to increase Voice assistant and smart speaker usage (bargaining power lies more heavily with the radio). Voice Assistant platforms' monetisation strategy is not focused on competing with radio. They are focused on indirect incremental e-commerce sales, non-competing services, and the direct sales of smart devices. 	<ul style="list-style-type: none"> Radio's contribution to Voice Assistant's value decreases as the proportion of usage derived from radio declines. Voice Assistant platforms are used for a wide variety of other services. Voice Assistant platforms' monetisation strategy are not focused on competing with radio. They are focused on indirect incremental e-commerce sales, non-competing services, and from the direct sales of smart devices.
Non- Benign [for radio]	<ul style="list-style-type: none"> Radio remains the core use case for Voice Assistants alongside music streaming (implying a degree of bargaining power lies with radio). The Voice Assistant platforms attempt to directly monetise their investment through radio (by charging access fees or charging a commission based on the profits radio receives for advertising). 	<ul style="list-style-type: none"> Radio is very dependent on voice assistants for distribution. Voice Assistant platforms' monetisation strategy is focused on increasing profits from competing audio services e.g. their own music streaming service (including radio-like services) / podcasts/news services; and/or extracting value from third-party skills/actions; and/or Audio advertising is an important driver of incremental growth for Voice Assistants, which could be harmful to radio. Exists a risk that Voice Assistants self-preference their radio-like services or by competing in audio advertising.

Source: Frontier Economics.

Impact of 'do nothing' on the value exchange

101. The assumptions behind each incremental revenue scenario in a benign scenario are outlined in Figure 6, below. The key differences are that in the low incremental revenue scenario, indirect revenues from complementary products are low, as are voice assistant shares of audio advertising products, meaning that platforms may attempt to directly monetise their investment through radio instead. Furthermore, radio is considered a core use case for voice assistants in this scenario. This means that a degree of bargaining power may lie with radio, although there is also a risk that platforms may take actions to extract value from radio.

102. However, in the high incremental revenue scenario, complementary subscription services increase at a faster pace due to strong complementarity between voice assistants and other services, digital platforms can generate revenue from audio advertising without harming radio, and radio is considered a less important use case. This creates a risk that voice assistants could self-preference their own services to compete with radio, and radio is more dependent on voice assistants - the balance of power could have shifted in favour of voice assistant platforms.

Figure 6: Scenarios on incremental revenues earned by voice assistants in a benign scenario

	Low Incremental Revenue Scenario	High Incremental Revenue Scenario
Common Assumptions	<ul style="list-style-type: none"> ▪ Smart speaker penetration is growing at the current pace. ▪ Radio advertising revenue is not affected by Voice Assistants. 	
Scenario Specific Assumptions		
Indirect revenues from e-commerce or complementary subscriptions	<ul style="list-style-type: none"> ▪ Revenues from complementary products (e.g. e-commerce) and services (e.g. Amazon Prime or Apple Music) are relatively low. 	<ul style="list-style-type: none"> ▪ Complementary subscription services increase at a faster pace due to strong complementarities between Voice Assistants and other services: <ul style="list-style-type: none"> • digital platform's music streaming services and other digital platforms subscription services (e.g., Amazon Prime). • Increased expenditure of Voice Assistant users in the platform's e-commerce marketplace. • Some incremental revenue generated from app sales.
Revenues from Audio Advertising	<ul style="list-style-type: none"> ▪ Voice Assistant share of audio advertising profits grows at a slow pace. 	<ul style="list-style-type: none"> ▪ Digital platforms can generate revenues from audio advertising (but not at the expense of radio advertising).
Role of Radio	<ul style="list-style-type: none"> ▪ Radio is considered a key use case for Voice Assistants and smart speakers since users do not derive significant value from other complementary Voice Assistant services. 	<ul style="list-style-type: none"> ▪ Radio is considered a less important use case for Voice Assistants since users enjoy many other services which are complementary to Voice Assistants.

103. Modelling by Frontier Economics⁴⁸ suggests that the total value associated with voice assistant platforms could rise from £80 million in 2022 to £156 million in 2032 in the low incremental revenue scenario, and from £115 million in 2022 to £458 million in 2032 in the high incremental revenue scenario. In 2022, in the low incremental revenue scenario, 43% of all voice assistant gross profits can be attributed to radio - equivalent to £34 million.⁴⁹ In the high incremental revenue scenario, 37% of all voice assistant gross profits can be attributed to radio - equivalent to £42 million. However, by 2032, radio is expected to make a lower proportionate contribution to voice assistant platforms' gross profits: 29% (low incremental revenue scenario) to 20% (high) - equivalent to £45 million (low) to £93 million (high). This includes approximately £1m (around 1.2% of the total gross margin) of benefits that Voice Assistants gain in 2022 as a result of the role that

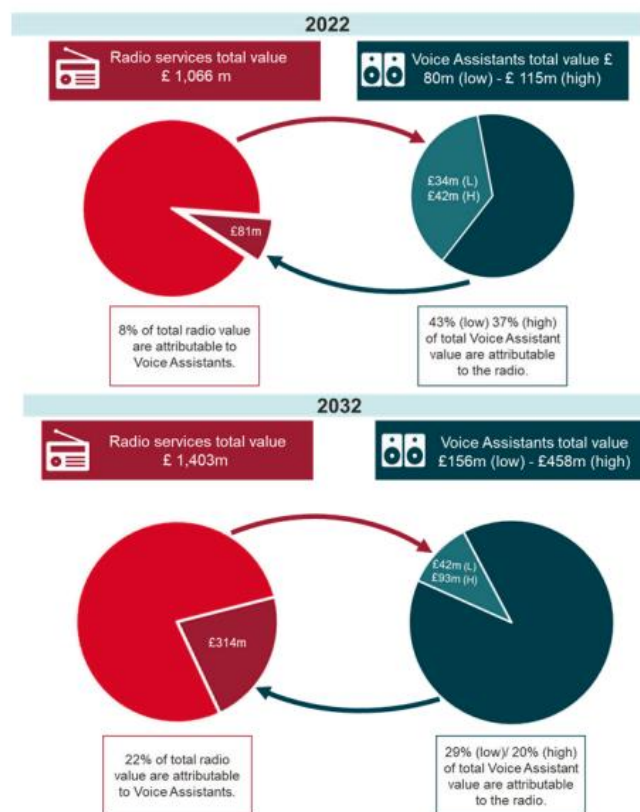
⁴⁸ Frontier Economics (2023): [“An Assessment Of The Bargaining Relationship Between Radio And Voice Assistant Platforms In The Coming Decade”](#)

⁴⁹ The 2022 values differ depending on the incremental revenue scenario because these are estimates of the gross margins generated by voice assistants, which rely on assumptions on the incremental revenue that digital platforms service across a range of complementary services and products. The assumptions are set out in detail in Annex B of the report by Frontier Economics.

radio plays in educating users on how to use smart speakers which declines to zero by 2032.⁵⁰

104. The total value created by radio is assumed to be £1.1 billion in 2022, rising to £1.4 billion by 2032. In 2022, 8% (£81 million) of this value can be attributed to voice assistant platforms. By 2032, 22% (£314 million) of the value generated by radio can be attributed to listening via voice assistant platforms. To put this into perspective, whilst the compound annual growth rate (CAGR) of the total value of radio is estimated to be 2.8% per annum from 2022 to 2032, the CAGR of the value of radio that can be attributed to voice assistant platforms is estimated to be 14.5% per annum - over 5 times higher. Although the value attributed to voice assistant platforms is a small proportion of the total value of radio in 2022, the rapid growth forecast between 2022 and 2032 helps to explain why voice assistants are expected to provide a much larger share of the value of radio by 2032.

Figure 7: Counterfactual value exchange between radio and voice assistants



Source: Frontier Economics.

105. Gains from integrating with platforms operating were relatively balanced in 2022, with radio providing a larger contribution to voice assistant platforms in absolute terms, and

⁵⁰ If radio did not include on-air calls to action educating users about how to use Voice Assistants many times a day it is assumed in the early years of the analysis that Voice Assistant use and take up would be lower, and hence Voice Assistant gross profit would be accordingly lower. We assume that by 2027 when take-up has plateaued and consumers are accustomed to using their smart speakers, radio no longer plays a significant role in educating users on how to use smart speakers.

the proportion of value radio brings to voice assistants also being higher. However, by 2032, voice assistant platforms are expected to provide a larger contribution to radio's value in absolute terms, and potentially even as a proportion of radio's value, depending on the scenario. Therefore, radio is expected to become increasingly reliant on voice assistant platforms as a growing proportion of radio's value is attributable to voice assistants, suggesting that radio's bargaining power is likely to weaken, even in a benign scenario. This is detailed in Figure 7.

106. The value that voice assistant platforms bring to radio can be estimated by considering the loss in gross margin if radio was not distributed over voice assistant platforms, based on:

- The share of total radio listening via voice assistant platforms, modelled as the sum of listening in-car and other listening.
- An assumption about the proportion of households that listen to radio via voice assistants that would stop listening to radio if it was not available on voice assistants.

107. The value generated by radio also includes the value generated by the BBC. The BBC, as a public service broadcaster, does not generate revenue or gross margin. However, it is important to include in this analysis, as the BBC's public value would clearly be diminished if BBC Radio did not interoperate with voice assistant platforms. In order to provide a high-level proxy for the purposes of this analysis, gross margin of commercial radio was uplifted in proportion to overall listening to account for incremental value of BBC Radio. It should be noted that this simplifying assumption does not imply that BBC Radio would have the same gross margin as commercial radio were it to operate commercially.⁵¹

108. This value exchange poses a risk for the radio industry, as it will provide voice assistant platforms with greater power in the bargaining process. Although digital platforms derive value from voice assistants in a number of ways, both directly (such as selling hardware that incorporates voice assistants as a feature) and indirectly (such as using them to gather data generated from users), the risk is that these platforms may choose to focus their monetisation strategies on generating revenues from radio traffic and increasing profits from online audio services that compete with radio. This could include extracting value from third party actions, and/or monetising their data assets to offer audio advertising, therefore creating a transfer of value away from radio towards smart speaker platforms.

109. It is not possible to know what the precise strategy of each digital platform is. Some strategies are clearly supportive of radio as radio continues to support value creation in the platforms and therefore the platform's ability to earn incremental revenues, whereas

⁵¹ There are many reasons why BBC gross margins might differ from commercial radio margins were BBC to operate commercially. These relate to its different costs, different economies of scale and scope, different audience demographics. Furthermore, were the BBC to operate commercially the supply of advertising impressions would increase significantly which would likely have a negative impact on the price per impression for all broadcasters.

other strategies have the potential to harm radio, particularly where platforms offer services that compete directly with radio. Already, digital platforms have a number of services that compete directly with radio including music streaming, radio-like services, audiobooks and podcasts, and control of these platforms allows them to prefer or cross-promote these services.

110. There is scope for greater risk for radio if voice assistant platforms chose to require first-party advertising as a condition of access or if they overlaid or interrupted radio's audio advertising; or if digital platforms decided to leverage the vast amount of the rich listening and other data collected by the platforms' ecosystems to offer highly targeted advertising; or if voice assistant platforms further restrict commercial radio's access to the data that it generates and needs to serve advertising. If bargaining outcomes move in favour of digital platforms, which the modelling suggests is likely at some future point, then there is a risk that platforms would have a clear economic incentive may seek to capture at least some of the value generated by radio, i.e. resulting in shift from a "benign" to a "non-benign" outcome for radio.
111. In our engagement with radio stations, one large station group highlighted that there would be a significant long-term cost to radio broadcasters if this regulation was not implemented. There would be direct costs, such as voice assistant platforms charging for access, and also indirect costs, for example by radio broadcasters being unable to access audiences on these platforms, which would reduce the value of radio to advertisers. Radio stations consider these costs to be substantial enough to threaten the sustainability of UK radio broadcasters.

Summary of counterfactual impacts

Gains from interoperating in 2022 are as follows:

- Total value of radio: £1.06 billion
- Value attributable to voice assistant platforms: £81 million (8%)
- Total value of voice assistant platforms: £80 million (low) - £115 million (high)
- Value attributable to radio: £34 million (43%) low - £42 million (37%) high

Table 4: Summary of counterfactual impacts in 2032 - future gains from interoperating, per annum

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	Total value of radio: £1.40 billion Value attributable to voice assistant platforms: £314 million (22% of total) Total value of voice	Total value of radio: £1.40 billion Value attributable to voice assistant platforms: £314 million (22% of total) Total value of voice

	<p>assistant platforms: £156 million</p> <p>Value attributable to radio: £42 million (29% of total)</p>	<p>assistant platforms: £458 million</p> <p>Value attributable to radio: £93 million (20% of total)</p>
Non-benign (for radio)	<p>Likely to be a higher value transfer from radio to voice assistant platforms than in the benign scenario. From our calculations, this could potentially be the highest value transfer from radio to voice assistant platforms out of the four scenarios set out here.</p> <p>This is the scenario where radio is a key use case for platforms, so platforms would extract value from platforms by exploiting the popularity of radio on their platforms.</p> <p>Likely behaviours include charging radio stations for access, either through a fixed proportion of revenues or a proportion of advertising impressions.</p>	<p>This is likely to be a higher value transfer from radio to voice assistant platforms than in the benign scenario.</p> <p>Radio is dependent on voice assistants for distribution, so platforms' monetisation strategies are focused on increasing profits from competing audio services.</p> <p>Therefore, there is a risk to radio stations that there is reduced access to live radio, as platforms are more likely to be focused on generating profits from competing services in a non-benign scenario. This is also the scenario where there is the highest risk of overlaying advertising, as audio advertising is an important driver of incremental growth for voice assistants.</p>

Option 1: (preferred)

112. Primary legislation to underpin the free access of live, licensed UK radio services to the platforms, and their findability by listeners on request. This legislation includes the following ex ante requirements, which would apply to platforms designated as providers of 'designated radio selection services' (DRSS):

- 'Must facilitate' - Ensure that all BBC and Ofcom-licensed commercial and community UK radio stations that have notified Ofcom that they want to be made available to listeners via these DRSS are indeed made available;

- 'No cost access' - Prevent providers of DRSS from levying charges on stations in relation to the provision of their licensed services via the DRSS;
- 'Findability' - Ensure that listeners are provided with their requested station in response to a clear request for that station;
- 'Integrity of service' - Prevent providers of DRSS from inserting or overlaying their own content (e.g. advertising) into radio station streams;
- 'Default route' - Ensure that listeners are provided with their requested station via the station's preferred routing (e.g. an aggregator such as BBC Sounds, Global Player, TuneIn or Radioplayer, or a direct integration with the platform where this is available), unless the listener has specifically requested an alternative route or the preferred route is unreasonable for the designated RSS to implement.

Table 5: Summary of main costs

Cost	Scale
The costs to voice assistant platforms associated with having to familiarise themselves with the legislation, understanding its implications and manage how this affects their business plans	<p>The direct cost to businesses totals £24,600. We assume that platforms will engage their in-house legal team, and possibly seek external legal advice as well.</p> <p>It is not known exactly how many businesses will be in scope of this regime, as designation will be determined following advice from Ofcom.</p>
The costs to radio stations associated with having to familiarise themselves with the legislation, understanding its implications and manage how this affects their business plans	The direct cost to business totals £59,000. Using evidence gathered from radio stations on their intended actions, we assume that radio stations will use their in-house legal teams where they have them, and seek guidance from Radiocentre as the industry body for commercial radio.
Costs to voice assistant platforms in adapting products to fit the new requirements	Voice assistant platforms are currently compliant, so we do not anticipate any 'day-one' compliance costs. We do not expect that platforms will have to change their actions in response to these measures in a way that would increase costs, although it may mean some platforms change their prioritisation decisions on updating algorithms, as part of business as usual actions.
Cost to voice assistant platforms of engaging with radio stations and Ofcom	<p>These costs are expected to be low, as platforms already have simplified solutions that enable them to engage with radio and manage costs efficiently. Direct integration is not a stipulation of this legislation, so any costs from direct integration are likely to be discretionary.</p> <p>Platforms may need to develop new processes for engagement with Ofcom, however we expect these costs</p>

	to be small.
Set up costs to Ofcom	These costs are estimated to be between £3.2 million and £3.4 million. As per Ofcom's fees principle, this will represent a cost to businesses.
Ongoing costs to Ofcom of monitoring and enforcement	<p>These costs are estimated to be between £1.6 million and £1.8 million per annum. They include costs of reporting prior to designating radio selection services, maintaining a list of services, enforcement activities, and reporting on fees received.</p> <p>Where Ofcom will need to undertake additional activities, such as reporting to the Secretary of State on the adequacy of the regime and reviewing the Code of Practice, these are estimated to be a one-off cost of between £1 million and £1.2 million.</p>

Table 6: Summary of main benefits

Benefit	Scale
Benefit to consumers of wider choice in content and easier access	By making radio stations easier to access, consumers are better able to listen to their chosen commercial and community radio stations. The regulation will also protect the existing social benefits from radio. This can have further wellbeing benefits through decreased loneliness. These benefits have not been monetised.
Benefits to community radio	These are expected to be substantially lower than the benefits to commercial radio that have been estimated in the value transfer. However, we expect that there will be benefits to community radio through the same routes as benefits are delivered to commercial radio. In particular, findability could be more important for community radio, as these stations are often small, and so are more at risk of being deprioritised in voice request responses.

Summary of value transfer

113. The provisions in this Bill, in particular the restrictions on the charges which platforms can levy on stations, the prohibition on platforms inserting adverts into radio streams, and the requirement that stations be delivered to listeners via those stations' chosen

routes will help to mitigate the value exchange described in the counterfactual whilst ensuring that radio stations still have clear incentives to create new partnerships and opportunities with platforms.

114. This high-level analysis bundles the impacts of some of these measures, as we cannot disentangle the impact on revenue of each intervention, particularly where the mechanism through which revenue is impacted is the same. The aggregate impact of these interventions is likely to be some value between the smallest impact and the combined effect of all three bundles, as these measures are not mutually exclusive. Further explanation on the value transfer follows the cost benefit analysis, including a summary of the value.

Costs

115. The main quantifiable impact is the cost to business, which will be covered by voice assistant platforms. These are illustrative estimates, providing an indication of the scale of impact. This assessment will also consider the regulator costs. It is assumed that all businesses will comply if they are designated.

Monetised Costs

116. The calculation for the cost to business is broken into four sections:
- Familiarisation costs
 - Other transition costs
 - Running costs
 - Monitoring and reporting costs

Transition Costs

Familiarisation costs:

117. The radio sector and voice assistant platforms will have to familiarise themselves with the proposed regulations. Industry has been sighted on these proposals through the 2021 Digital Radio and Audio Review and subsequent stakeholder engagement, and so there is knowledge of the proposed changes already.

Radio stations

118. Ofcom estimates that there are around 275 analogue commercial stations in the UK.⁵² Stations can easily choose to go online or remove their online offering, so there is no comprehensive list of online radio stations. Therefore, we use this figure as our best approximation of the number of commercial radio stations that would be in scope of the regulations. Of the 275 analogue stations, 27 are independent stations and there are 18 station groups. Around 175 are represented by the 3 large groups - Global, Bauer and

⁵² Ofcom provides a list of all analogue radio stations, including their frequency, licensee and which group they belong to: <http://static.ofcom.org.uk/static/radiolicensing/html/radio-stations/analogue/analogue-main.htm>

Wireless (part of NewsUK). We have then assumed there to be 9 medium sized groups representing 64 stations, and 33 small groups/independent stations.⁵³ It is likely that some additional online radio stations would come into the medium and large station groups total if carriage was secured for the service on DAB. There are a further 319 community stations operating in the UK.⁵⁴ We therefore assume that there will be approximately 364 companies who will need to familiarise themselves with this legislation.

119. Our engagement with a sample of stations provided quantitative evidence from a large station group on the cost of familiarisation and dissemination. To guard against optimism bias, we assume that these estimates will apply to all large and medium sized station groups. We anticipate that familiarisation for radio stations will take approximately 5 hours of an in-house legal professional's time, at a median hourly wage of £25.92.⁵⁵ It can also be assumed that another member of staff will need approximately 5 hours at an hourly wage of £20.81 to understand the change, consider implications, brief senior management and disseminate information on the changes to the rest of the organisation.⁵⁶ We apply these costs to the 3 large station groups and 9 medium sized groups. An uplift of 22% should also be applied to cover overheads, as per RPC guidance⁵⁷. Therefore the total familiarisation cost for large station groups is; the number of stations x cost of labour + uplift:

$$(12 \times ((5 \times 25.92) + (5 \times 20.81))) \times 1.22 = \mathbf{£3,420.64}$$

120. For small station groups, independent stations and community radio stations, the time spent is likely to be lower, but they may face higher costs if they need to seek external legal advice. Our engagement with a sample of commercial and community radio stations provided evidence that most stations are unsure of the costs they may incur as a result of this regulation. Most respondents said that they would go to their industry body for more detailed information (Radiocentre for commercial radio; organisations including the Community Media Association and the UK Community Radio Network for community radio) and guidance on what to do following the regulation, with a number of stations reporting that they would use existing in-house resources to familiarise themselves with the regulation. This regulation does not require radio stations to change any actions, so we expect that they will not need a significant amount of time to familiarise themselves with the regulation, so familiarisation costs are not expected to be significant. It is possible that a few smaller stations could seek external legal advice, but the evidence gathered from stations suggests that this is likely to only apply to a very small number of stations.

⁵³ There is no set definition for small and medium station groups. This assumption is an estimate based on anecdotal sector knowledge using Ofcom data. There is no dataset available to confirm this. These station groups are still likely to be classified as small businesses in terms of employees and revenue.

⁵⁴ Ofcom: [Media Nations \(2022\)](#)

⁵⁵ Annual Survey of Hours and Earnings, ONS.

⁵⁶ Annual Survey of Hours and Earnings, ONS. Average hourly wage of a manager or director in the creative industries

⁵⁷ [Implementation costs](#), August 2019, RPC.

121. To guard against optimism bias, we assume that smaller groups, independent stations and community radio stations would take approximately 5 hours of a senior manager's time, as typically senior management engage with regulation. This is in line with assumptions previously made following stakeholder engagement with Radiocentre. We apply these costs to the 352 small groups, independent stations and community stations. An uplift of 22% should also be applied to cover overheads, as per RPC guidance⁵⁸. Therefore the total familiarisation cost for smaller stations and community stations is; the number of stations x cost of labour + uplift:

$$(352 \times (5 \times 25.96)) \times 1.22 = \mathbf{\pounds 55,741.31}$$

122. Radiocentre's role as the commercial radio industry body includes advising the industry on the changes and producing relevant resources to support the transition. We have engaged with Radiocentre to understand their role in the sector. They believe these costs will be zero as it is part of their core business function and would be business as usual for them, with no change to their day-to-day activities. If there is a cost, this will be negligible.

- Therefore, the total familiarisation cost for the radio industry is the sum of the cost for large station groups and small stations and groups:

$$\pounds 3,420.64 + \pounds 55,741.31 = \mathbf{\pounds 59,161.95}$$

- We do not expect radio stations to incur any other significant transition costs, as they will not need to change how they provide content. There may be additional costs, for example time for others in the business to understand the regulations, but we are unable to estimate these at this stage. There may also be additional costs of familiarising with the secondary legislation and Ofcom's guidance. However, we anticipate that these costs will be minimal, as radio stations are not required to take any actions in response to this regulation. We will look to estimate these costs for the impact assessment at the secondary legislation stage.

Voice assistant platforms

123. For this part of the assessment, we have not had the benefit of information from the platforms on the nature of specific costs that they would secure to ensure compliance with the new requirements in the event that they were designated as a radio selection service. From discussions with them, we are aware that the platforms' different approaches to the integration of radio services means that the costs of compliance will vary and may vary considerably between platforms. In the absence of information, we have identified the types of costs that platforms are certain to encounter. However, we acknowledge that this may underestimate the costs that will fall onto platforms. We will look to update estimates based on further information on compliance costs from the platforms

⁵⁸ [Implementation costs](#), August 2019, RPC.

124. There will clearly be a familiarisation cost to voice assistant platforms (prior to designation) of having to read the regulation, understand its implications and manage how this affects their business plans. They will also have to familiarise themselves with any ensuing Ofcom guidance. There will be a varying level of familiarisation depending on the degree to which this regulation will affect the business practices. As these measures are likely to impact the business plans of smart speaker platforms, we assume that it will take longer for them to familiarise themselves with the legislation and disseminate information.

125. Firstly, we have conservatively assumed that all large voice assistant platforms that target UK audiences will require a legal employee to read the regulation and understand whether it has implications for the firm. We then assume that platforms who are designated will not only read the regulations but also discuss at management level what the implications could be, and spend time planning potential adjustments to their business model.

126. Currently, the domestic market is dominated by Amazon, Google and Apple, who between them support more than 95% of voice-activated smart speakers. While designation of a given platform will be a matter for Ofcom, these three organisations (from the platform perspective) may be affected by the legislation at this stage. Other organisations may come into scope in the event that they become significant players in the voice-activated connected audio device market.

127. We assume that platforms would choose to engage a team of in-house legal professionals, as well as external legal advice. We further assume that they will have a policy team working on this regulation, as it has the potential to change future revenue streams. This level of resource spend on familiarisation is not necessary to meet the requirements of the regulations. However, we believe that platforms will want to be well-prepared for the regulations coming into force, so it is likely that they will choose to seek external legal advice.

128. Assuming that these three organisations are designated, we estimate that for each organisation, familiarisation could represent work for two full-time equivalent (FTE) legal professionals in-house. We therefore estimate that each of the legal FTEs will dedicate no more than 35 hours (one week) to the tasks, at a median hourly wage of £25.92.⁵⁹

129. We further estimate that these organisations will have 2 FTEs working on policy and regulation, who could dedicate up to 35 hours (one week) to the tasks of briefing management, planning adjustments to the business model as required, and disseminating information throughout the organisation, at an hourly wage of £20.81.⁶⁰

- Taking these costs together, we get the total cost per business of internal legal and policy familiarisation. An uplift of 22% is also applied to cover non-wage labour costs,

⁵⁹ Annual Survey of Hours and Earnings, ONS.

⁶⁰ Annual Survey of Hours and Earnings, ONS. Average hourly wage of an individual in the Information and Communication SIC.

as per RPC guidance⁶¹. Therefore, the total familiarisation cost for businesses from in-house familiarisation is:

$$\text{Total cost per business} = ((70 \times 25.92) + (70 \times 20.81)) \times 1.22 = \mathbf{\pounds 3,990.74}$$

130. These organisations may also choose to employ external legal services, following initial familiarisation from staff. External legal consultancy services typically have quick turnaround on advice, approximately one day. This is likely to consist of a legal executive reading the regulation and providing advice, and a more senior legal executive reviewing this advice. We use the guidance on solicitors' hourly rates⁶² and assume that a Grade B legal executive would spend approximately one day (7 hours) at an hourly rate of £348 to read and understand the regulation, and provide advice. We further assume that a Grade A legal executive would spend approximately two hours on the advice, at an hourly rate of £512.

- Taking these costs together, we get the total cost per business of external legal advice. An uplift of 22% is also applied to cover non-wage labour costs, as per RPC guidance⁶³:

$$\text{Total cost per business} = ((7 \times 348) + (2 \times 512)) \times 1.22 = \mathbf{\pounds 4,221.20}$$

- Taking these three costs together, we get the total cost to voice assistant platforms of familiarising themselves with this change and adapting their business models accordingly:

$$\text{Total cost to voice assistant platforms} = 3 \times (\pounds 3,990.74 + \pounds 4,221.20) = \mathbf{\pounds 24,635.82}$$

Taken together, these values result in a total familiarisation cost to business of **£83,798**.

131. There may be additional costs, for example time for others in the business to understand the regulations, but we are unable to estimate these at this stage. There may also be additional costs of familiarising with the secondary legislation and Ofcom's code of practice, including detailed guidance on how to meet the operational requirements of the measure. We anticipate that these costs will be minimal, as this legislation sets out the principles for businesses to follow. We will look to estimate these costs for the impact assessment at the secondary legislation stage.

132. The table below describes how these values may change under different scenarios, as set out in the counterfactual. As noted in the table, we do not expect there to be any changes to the cost under different scenarios.

Table 7: Comparison to counterfactual scenarios and impact

⁶¹ [Implementation costs](#), August 2019, RPC

⁶² <https://www.gov.uk/guidance/solicitors-guideline-hourly-rates>

⁶³ [Implementation costs](#), August 2019, RPC

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	<p>Radio stations and voice assistant platforms would seek to understand the regulations, implications for their organisations, and any changes they might need to make.</p> <p>This regulation does not require radio stations to change their actions, so we expect familiarisation costs to be low.</p> <p>Voice assistant platforms are likely to spend longer familiarising themselves with the legislation and disseminating information, as these measures are likely to impact their business plans.</p>	<p>We expect familiarisation costs to be the same between the low and high incremental revenue scenarios in a benign scenario for radio. The actions that radio stations and voice assistant platforms take are likely to be the same, and with a similar focus, as platforms' monetisation strategies are not expected to differ significantly between these scenarios.</p>
Non-benign (for radio)	<p>We expect familiarisation costs to be the same in a non-benign scenario, as we expect that radio stations and voice assistant platforms will take the same actions to familiarise themselves with the regulation, disseminate information, and adjust business planning.</p> <p>There may be a different focus in business planning discussions, as in a non-benign low incremental revenue scenario, platforms may attempt to monetise their investment through radio, but we expect these</p>	<p>We expect familiarisation costs will be the same in a non-benign, high incremental revenue scenario, as radio stations and voice assistant platforms are not expected to change the actions they take to familiarise themselves with the regulation, disseminate information and adjust business planning.</p> <p>There may be a different focus in business planning discussions, as in a non-benign high incremental revenue scenario, platforms' monetisation strategies are</p>

	discussions to take a similar amount of time as in the benign scenario.	focused more on competing audio services. However, we expect these discussions to take a similar amount of time as in the benign scenario.
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Other transition costs

Implementation costs (voice assistant platforms)

133. Following RPC guidance on implementation costs, we have outlined above the potential familiarisation costs that voice assistant platforms may incur. There may also be implementation costs incurred as a result of developing products to be compliant, collecting information to demonstrate compliance, and staffing costs. We anticipate that these costs will be low for voice assistant platforms, as platforms have systems in place currently that are compliant, and as we assume that platforms would choose to make cost-effective decisions in how to remain compliant, we assume that they would continue to use those systems rather than developing alternative solutions to ensure compliance.

134. As touched on at earlier points in this impact assessment, the current relationship between platforms and stations is broadly benign, and the harms identified have largely not yet arisen. Specifically, BBC services, commercial radio stations, and the majority of community stations are generally provided to listeners on connected audio devices in response to those listeners' voice requests. As such, it is clear that for UK radio in general, stations are available; the platforms are not inserting content into radio streams; stations are not being charged; they are being delivered to listeners via routes with which they are generally content; and they are broadly - although perhaps not always intuitively - findable.

Developing products to fit requirements

135. We do not expect there to be any 'day-one' compliance costs for platforms, as they are largely compliant. We are engaging with platforms to get a more detailed understanding of whether they believe their current approach is fully compliant with all aspects of the proposed regulations, and how much compliance could cost.

136. We expect that platforms will not have to make significant changes in response to these measures in such a way that their costs would increase. However, these measures could change platforms' prioritisation decisions in their business as usual activities. For example, currently there are some smaller radio stations which are difficult for users to access as they have similar names to other stations or other media, such as podcasts. This legislation would require platforms to adjust their algorithms such that the correct station is played when a listener requests it. Platforms routinely update their algorithms to be more accurate in order to improve user experience, so it is likely that platforms would already take these actions at some point in the future as part of business as usual.

The regulation ensures that platforms update their algorithms, and that they do it sooner than perhaps they would have.

Engagement with radio stations and Ofcom

137. Administrative costs of engaging with radio stations are likely to be unchanged, as platforms have simplified solutions that enable them to engage with radio and manage costs efficiently. If platforms chose to deal with radio stations on a case-by-case basis, then their costs would be higher. However, direct integration is not a stipulation of this legislation, and there are aggregators available that make integration much simpler for both platforms and stations.
138. Evidence from our engagement with radio stations suggests that they largely will not change how they integrate with platforms as a result of this regulation, whether this is by direct integration or through an aggregator, so we can assume that radio stations will continue to use their current methods of integration. Therefore, we can reasonably expect that platforms will also continue to choose to use their simplified solutions as the lowest-cost route to meeting the requirements of the legislation.
139. Platforms might need to develop a new process for engagement with Ofcom. We expect these costs will be small relative to the value exchange, as we expect that this will be a small commitment for the platform.

Summary of implementation costs

140. We do not, therefore, expect the platforms to have to significantly change their current activities (and thereby incur significant implementation costs) in order to fully comply with the new regime - noting that the Bill sets out a largely principles-based approach to regulation, with further steps to follow before particular platforms are designated. Precise implementation costs - to the extent that any such costs are necessary - will be better known once these steps have been taken and decisions on designation have been made. This will be at the secondary legislation stage.
141. In the meantime, we have asked the platforms to advise what costs they would expect to need to incur in order to achieve compliance, and will continue to engage them in this regard. We will conduct a subsequent IA at the secondary legislation stage, when we will have more information on the specific actions that platforms are expected to take.
142. The table below describes how these values may change under different scenarios, as set out in the counterfactual. We do not expect there to be any difference in implementation costs between different benign scenarios, but there may be higher implementation costs in a non-benign scenario.

Table 8: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)

Benign (for radio)	<p>In a benign scenario, we anticipate that these costs will be low for voice assistant platforms, as they currently have systems in place that are fundamentally compliant. We assume that they would continue to use those systems rather than developing alternative solutions to ensure compliance. We further expect that there will not be any 'day-one' compliance costs.</p> <p>These measures could change platforms' prioritisation decisions in their business as usual activities. For example, improving the accuracy of algorithms could become a higher priority, but this is something that platforms do routinely, so it is not an additional cost.</p>	We expect implementation costs to be the same between the low and high incremental revenue scenarios for voice assistant platforms in a benign scenario for radio. The systems that platforms have in place are currently fundamentally compliant.
Non-benign (for radio)	<p>It is possible that platforms would have some additional implementation costs in a non-benign scenario. In a low incremental revenue scenario, this could be the case if they have to reverse investments in capacity building and technological development that they may have made to, for example, set up a process for charging radio access fees.</p> <p>We are unable to assess whether platforms would have made these investments in preparation to extract more value from</p>	<p>It is possible that platforms would have some additional implementation costs in a non-benign scenario. In a high incremental revenue scenario, this could be the case if they have to reverse investments in capacity building and technological development that they may have made to, for example, overlay advertising on live radio streams.</p> <p>We are unable to assess whether platforms would have made these investments in preparation to extract more value from</p>

	<p>radio stations, so we cannot estimate the extent of this foregone investment. However, we can reasonably assume that platforms would not have made significant investments, as they have been made aware of these regulations, and so would not design processes that would make them non-compliant. Furthermore, as 'non-benign' refers to a potential future scenario, and this is not a current action being taken by platforms, this is not a tangible cost to them.</p>	<p>radio stations, so we cannot estimate the extent of this foregone investment. However, we can reasonably assume that platforms would not have made significant investments, as they have been made aware of these regulations, and so would not design processes that would make them non-compliant. Furthermore, as 'non-benign' refers to a potential future scenario, as this is not a current action being taken by platforms, this is not a tangible cost to them.</p>
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Radio stations (transitional)

143. Radio stations may have some small administrative costs, for example notifying Ofcom that they want to be included in the list of stations to be covered by the protections, and potentially providing some confirmation of compliance with advertising standards. We have contacted commercial and community radio stations for further detail on costs, but at this stage most commercial and community radio stations are unsure of the costs they may incur as a result of this regulation. One large station group said that they expect the regulation is unlikely to result in high additional costs for their business.

144. Most respondents said that they would go to their industry body for more detailed information and guidance on what to do following the regulation, so transition costs are not expected to be significant. Radiocentre's role as the industry body for commercial radio includes advising the industry on the changes and producing relevant resources to support the transition. Similarly, part of the role of community radio representative bodies including the Community Media Association and the UK Community Radio Network would entail being a point of contact for community stations with queries about the impact of the measures.

145. We will engage further with the radio sector to gain a better understanding of the scale of these costs as we further develop the regulation, and we will aim to provide an estimate of this cost for the impact assessment at secondary legislation stage. This part of the regulation is permissive, so it does not require radio stations to make any changes. It enables them to use their preferred aggregator, but there is no requirement for them to change their current method of integrating with voice assistant platforms.

146. The table below describes how these values may change under different scenarios, as set out in the counterfactual. As noted in the table, we do not expect there to be any significant changes to the cost under different scenarios, but it is possible that more radio stations may want to be covered by protections if they believe that a non-benign scenario is more likely.

Table 9: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	<p>This legislation does not require radio stations to make any changes. In a benign scenario, radio stations may have some small administrative costs, such as from notifying Ofcom that they want to be covered by the protections.</p> <p>Currently, radio stations are uncertain of the costs they may incur as a result of the regulation, but they intend to go to their industry body for more detailed information and guidance.</p>	<p>We expect transition costs for radio stations to be the same between the low and high incremental revenue scenarios in a benign scenario for radio. There may be some small administrative costs.</p>
Non-benign (for radio)	<p>We expect transition costs for radio to be the same in a non-benign scenario as in a benign scenario, as we expect that radio will take the same administrative actions, such as notifying Ofcom that they want to be covered by the protections.</p> <p>It is possible that more radio stations would want to notify Ofcom if they believe there is a higher risk of a non-benign scenario. However, as the non-benign scenario</p>	<p>In a non-benign scenario, we expect transition costs will be the same in a high incremental revenue scenario as in a low incremental revenue scenario.</p> <p>Similar to the low incremental revenue scenario, it is possible that more radio stations would want to notify Ofcom if they believe there is a higher risk of a non-benign scenario. However, as the non-benign</p>

	is a potential future scenario, any additional transition costs from a perceived increase in the likelihood of this scenario cannot be estimated at present.	scenario is a potential future scenario, any additional transition costs from a perceived increase in the likelihood of this scenario cannot be estimated at present.
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Ofcom costs (transitional)

147. Ofcom have provided an estimate of the one-off set up costs arising from this legislation. These include the cost of:

- Consulting on how they would exercise their duty to report to the Secretary of State and make recommendations prior to the designation of radio selection services;
- Developing and consulting on the Code of Practice under the provisions;
- Developing a notification regime for relevant internet radio services (RIRS) - i.e. those BBC and Ofcom-licensed commercial and community stations which intend to seek protection in accordance with the measures in this legislation;
- Developing a notification regime for designated radio selection services (DRSS) - i.e. those platforms which are designated by the Secretary of State;
- Preparing and publishing guidance on how they will exercise their enforcement powers; and
- Developing and publishing a statement of principles as to the charging of fees by Ofcom.

148. The information and figures provided below are intended to be regarded as estimates only, and do not include any contingency (i.e. nil provision made for optimism bias) for reasons more fully set out above.

149. Ofcom estimates total set-up costs to be within £3.2 million to £3.4 million, which includes staff costs and non-staff costs, such as ICT and supporting infrastructure.

150. The table below describes how these values may change under different scenarios, as set out in the counterfactual. The set up costs for Ofcom are expected to be the same, regardless of the scenario, as Ofcom will have to undertake the same actions.

Table 10: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	Ofcom will incur costs as set out above. These include	Ofcom will incur costs as set out above.

	the costs of developing and consulting on the Code of Practice, developing notification regimes, and preparing and publishing guidance.	We expect Ofcom's set up costs to be the same in the benign scenario, regardless of the incremental revenue scenario, as they will undertake the same actions.
Non-benign (for radio)	Ofcom will incur costs as set out above. We expect Ofcom's costs to be the same in a non-benign scenario as in a benign scenario, as they would take the same actions.	Ofcom will incur costs as set out above. Similar to in a low incremental revenue scenario, we expect Ofcom's costs to be the same in a non-benign scenario as in a benign scenario, as they would take the same actions.

On-going Costs

Additional reporting costs (voice assistant platforms)

151. There are likely to be costs associated with additional reporting to Ofcom, along with familiarisation costs of reading and understanding Ofcom's guidance, but we expect these will be small.

152. The table below describes how these values may change under different scenarios, as set out in the counterfactual.

Table 11: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	Voice assistant platforms will have to report to Ofcom. Reporting costs are expected to be the same regardless of the scenario.	Voice assistant platforms will have to report to Ofcom. Reporting costs are expected to be the same regardless of the scenario.
Non-benign (for radio)	Voice assistant platforms will have to report to Ofcom. Reporting costs are expected to be the same regardless of the scenario.	Voice assistant platforms will have to report to Ofcom. Reporting costs are expected to be the same regardless of the scenario.

Ofcom costs (ongoing)

153. Ofcom estimates the range of ongoing (annual) running and enforcement costs to be between £1.6 million and £1.8 million. This figure is intended to be regarded as an estimate only. These costs comprise:

- Reporting to the Secretary of State prior to designating radio selection services;
- Receiving notifications and maintaining the list of RIRS;
- Received notifications and maintaining the list of DRSS;
- Any enforcement activity under the regime; and
- Reporting on fees received.

154. The provisions in the Bill provide for Ofcom to undertake additional activities on request. These include reporting to the Secretary of State on the adequacy of the regime, prior to considering amendments to the regime; and reviewing the Code of Practice, at the request of the Secretary of State. Ofcom estimates the one-off cost of these activities to be between £1 million to £1.2 million.

155. The table below describes how these values may change under different scenarios, as set out in the counterfactual.

Table 12: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	Ofcom will incur annual running and enforcement costs as set out above. These include the costs of reporting to the Secretary of State, maintaining the lists of RIRS and DRSS, and any enforcement actions taken.	Ofcom will incur costs as set out above. We expect Ofcom's annual costs to be the same in the benign scenario, regardless of the incremental revenue scenario, as they will undertake the same actions.
Non-benign (for radio)	Ofcom will incur costs as set out above. These costs may be higher if radio stations believe there is a higher risk of a non-benign scenario, as more radio stations may want to be covered by the provisions.	Ofcom will incur costs as set out above. Similar to the low incremental revenue scenario, these costs may be higher if radio stations believe there is a higher risk of a non-benign scenario, as more radio stations may

	<p>Costs to Ofcom could also be higher if they need to take more enforcement action. This is more likely in a non-benign scenario.</p>	<p>want to be covered by the provisions.</p> <p>Costs to Ofcom could also be higher if they need to take more enforcement action. This is more likely in a non-benign scenario.</p>
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Ofcom fees (which represent a cost to business)

156. Ofcom's fees principle centres on a full recovery of costs. Thus, the fees charged by Ofcom would be equal to the costs incurred in the administration of the new regime. Both radio stations and voice assistant platforms may bear some of this fee, as set out in the legislation, with the proportions to be determined by Ofcom. We assume that the fees will mostly be paid by the regulated party, as is standard.
157. As Ofcom will need to fully recover its costs, the first year of fees may be elevated to reflect the start-up costs incurred in setting up the new regime. As this regime is novel and developing, and the first time Ofcom will be regulating online-delivered radio, they are not able to provide estimates of stakeholder fees.
158. We contacted radio stations to understand their perspective on regulatory costs. One large station group said that whilst the regulation may result in increased regulatory costs through the annual fee to Ofcom, and whilst the amount of this fee is unknown (as it will be determined by Ofcom), they do not expect it to be significant. The draft Bill states that the fee must be "justifiable and proportionate, having regard to the circumstances of the person required to pay it."
159. As Ofcom fees are centred on full recovery of cost, we can reasonably assume that the total value of fees would be equivalent to the Ofcom estimates of set up, running and enforcement costs. Furthermore, fees would be higher in a scenario that would incur additional running costs and enforcement action. Therefore, fees for businesses are likely to be higher in a non-benign scenario.
160. While the IA assumes full compliance, there may be costs to regulated firms related to warnings, notices and/or fines for non-compliance. These will be determined as part of Ofcom's work setting requirements

Non-monetised costs

161. All non-monetised costs are included in the value transfer below. We do not anticipate any additional non-monetised costs arising from this regulation.

Benefits

162. All quantifiable impacts are captured in the value transfer, below. These are illustrative estimates. The other benefits relating to consumer choice and wider benefits of radio will be researched but not quantified in the headline figures.

Monetised Benefits

163. All monetised benefits are included in the value transfer below. We do not anticipate any additional monetisable benefits arising from this regulation.

Non Monetised Benefits

Consumers - wider choice and easier access to radio

164. This regulation is intended to help ensure that voice assistant platforms - which increasingly intermediate the relationship between the consumer and UK radio services - do not undertake activities which could harm UK radio or impact on UK consumer choice. As consumers increasingly use voice assistant platforms to access news, information and entertainment, ensuring the accessibility and integrity of radio services helps to protect the benefits of radio that consumers enjoy.

165. The benefits to consumers as a result of these regulations will mostly be in the form of protecting the existing social benefits from radio, as increased radio listening transfers to voice assistant platforms. If radio revenues were materially reduced in the “non-benign” outcome, the sector’s ability to invest to continue to support its public value would be diminished, negatively impacting consumers, and wider society as a result.

166. These social benefits are inherent across the range of stations in the UK, from the BBC and national commercial stations to the smallest community radio services, which provide a voice for hundreds of local communities across the UK, reflecting a diverse mix of cultures and interests and providing a variety of mostly locally produced content.

167. There are also likely to be benefits to consumers in having a wider choice of radio stations and easier access to them (findability) when using voice assistant platforms to listen to radio. Radio provides local and community-based content which is relevant and accessible to people throughout the UK, ranging from national stations such as BBC Asian Network, to the multitude of local commercial and community radio stations. Around 40 community stations are targeted at ethnic minority communities.

168. In addition, there is a wider intangible benefit to society from news and information, including local content, being easily accessible to UK audiences. The social benefits of radio that this regulation protects include the plurality of news provision, supported by radio broadcasting high-quality and reliable news, as well as increased awareness of issues that affect listeners’ lives and communities. Radio is consistently found to be the

most trusted medium in Europe - by 56% of the population on average (and 61% of people in the UK) in 2022, compared to 49% for both TV and press.⁶⁴

169. Evidence from the Community Life Survey found that 13% of people living with a long-term illness or disability said that they felt lonely often or always, compared to 3% of people without, and they were less likely to say they never felt lonely.⁶⁵ Radio is particularly important for older and more vulnerable audiences, as a way for people to keep connected with society and also to counter isolation and loneliness. For example, 93% of blind and partially-sighted people listen to the radio⁶⁶. Live radio is also commonly used as a comfort when individuals feel lonely. Protecting live radio enables it to continue to deliver these benefits to audiences who rely on radio for company.

170. The table below describes how these values may change under different scenarios, as set out in the counterfactual.

Table 13: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	In a benign scenario, the benefit to consumers comes from protecting the existing social benefits from radio. These include content covering a diverse mix of cultures and interests, benefits to society from news and information, and reduced loneliness.	We expect benefits to consumers to be the same in the low and high incremental revenue scenarios in a benign scenario for radio.
Non-benign (for radio)	In a non-benign scenario, radio revenues could be materially reduced in the counterfactual. Therefore, the benefits to consumers from this regulation could be even higher. In the low incremental revenue scenario, risks to radio are lower, as it is a core use case for voice	In a non-benign scenario, radio revenues could be materially reduced in the counterfactual. Therefore, the benefits to consumers from this regulation could be even higher. This is more likely in a high incremental revenue scenario, where radio is a relatively less important

⁶⁴ Eurobarometer, 2022

⁶⁵ [DCMS Community Life Survey 2021/22: Wellbeing and loneliness](#)

⁶⁶ Digital Radio and Audio Review, 2021

	assistant platforms, but this regulation still protects these benefits to consumers.	driver of growth for voice assistant platforms.
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Community radio

171. Community radio stations - of which there are more than 300 across the UK - will benefit from this legislation in much the same way as commercial and BBC, insofar as the measures will secure their availability and findability on connected audio devices. The provision relating to integrity of service may affect community stations to a different degree than commercial ones, as community radio revenues are less dependent on advertising (over which it might be expected that the platforms would overlay their own advertising content). On the other hand, the provisions around access and findability may benefit community stations more than commercial and BBC stations, as their names may be less likely - given that their average listenership is lower - to be the default response if a speech request is unclear.

172. The table below describes how these values may change under different scenarios, as set out in the counterfactual.

Table 14: Comparison to counterfactual scenarios and impact

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	In a benign scenario where platforms earn low incremental revenue from complementary products and services, the benefit to community radio stations is the protection of their revenues earned through total listening and advertising. These benefits are comparable to those for commercial radio as described in the value exchange, albeit to a smaller degree.	In a benign scenario where platforms earn high incremental revenue from complementary products and services, the benefit to community radio stations is similar to that in a low incremental revenue scenario. These benefits are comparable to those for commercial radio as described in the value exchange, albeit to a smaller degree.
Non-benign (for radio)	In a non-benign scenario, community radio stations	In a high incremental revenue scenario,

	<p>benefit from protections in the same way that commercial radio stations do.</p> <p>This includes a tangible benefit from free access, and possibly a tangible benefit from ensured availability, although this is less likely in a low incremental revenue scenario.</p>	<p>community radio stations are likely to benefit from ensured availability. The names of community radio stations are less likely to be the default response if a speech request is unclear, so these improvements to findability are likely to benefit community radio stations relatively more than commercial radio stations.</p> <p>They will also benefit from integrity of service, but this is less of an issue for community radio stations, as they receive less of their revenue from advertising compared to commercial radio.</p>
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Value transfer

173. The main impact of these regulations is the reversal of some of the value transfer set out in the counterfactual, from voice assistant platforms to radio stations. These are illustrative estimates against a range of counterfactual values, representing the maximum and minimum impact on the basis of a *status quo* counterfactual to provide an indication of the scale of impact. These impacts largely reflect a cost to voice assistant platforms, and an equal benefit to radio stations, when compared to the counterfactual value transfer. For IA purposes, this is treated as a transfer between businesses: from voice assistant platforms and radio.

174. Radio stations are likely to benefit from the regulations on voice assistant platforms, as the regulations aim to reverse some of the potential transfer of value from radio towards voice assistant platforms and reduce the risk of these platforms seeking to capture some of the value currently generated by radio (i.e. a “non-benign outcome” for radio). There is some uncertainty around the behaviours that these platforms may choose to take in the future, so this regulation aims to future-proof against this risk, given the expected shift in bargaining power over the coming decade.

175. The main uncertainty surrounding this analysis is that we do not know what strategies voice assistant platforms may adopt in the future. It is uncertain whether they will start to adopt strategies that could have the harmful effect on UK radio that the Government is legislating to prevent and whether, as a result, they will generate high or

low incremental revenue from complementary services. The effects of each provision set out below will depend on the behaviours of voice assistant platforms; this is a key uncertainty in this analysis.

176. We present an up to date assessment illustrating how the balance of power is gradually shifting towards voice assistant platforms, drawing on research commissioned by Radiocentre and carried out by Frontier Economics. However, there is still uncertainty on the future behaviour of platforms. This analysis sets out potential scenarios, based on whether platforms' monetisation strategies are focused on recovering value from areas that do not compete with radio, or from extracting value from third parties. We have been able to monetise some impacts compared to the counterfactual of a benign scenario for radio, with voice assistant platforms having either high or low incremental revenue from their services. It is reasonable to assume that the transfer would differ in a non-benign scenario. This analysis includes a qualitative description of the expected changes to the transfer under a non-benign scenario.

177. The calculation of the reversal of the value transfer is broken into 4 sections:

- Bundling of measures by their aggregate impact on revenue
- Calculation of the impact of bundled measures, where monetisable
- Comparison to the counterfactual value transfer in a low and high incremental revenue scenario
- How these values could compare to a non-benign scenario

Bundling measures by their aggregate impacts

178. The intended effect of the set of interventions listed in Table 15 is to ensure that if bargaining power shifts increasingly in favour of voice assistant platforms, these platforms cannot use that power to prevent listeners from accessing live radio, or to take a share of radio's revenues in exchange for that access. In this analysis, we consider the impact of these measures as the potential revenue that radio stations are able to either gain or retain from protecting them against these actions. The mechanisms through which each measure impacts radio stations' revenue are explained in the table below.

179. This high-level analysis bundles the impacts of some of these measures, as we cannot disentangle the impact on revenue of each intervention, particularly where the mechanism through which revenue is impacted is the same. For IA purposes, this impact is treated as a transfer between platforms and radio. The aggregate impact of these interventions is likely to be some value between the smallest impact and the combined effect of all three bundles, as these measures are not mutually exclusive.

180. Therefore, we have 3 bundles that will be described in detail:

- Ensuring availability
- No cost access
- Integrity of service

Table 15: Aggregate impact of interventions on value transfer

Bundle	Interventions	Impact on revenue
<i>Ensuring availability</i>	Findability	The findability provision could increase radio listening on voice assistant platforms by making it easier for listeners to access the radio station they want to listen to. This improved access could improve the user experience, and potentially increase listening via smart speakers. This could therefore increase radio revenues as more listeners allow radio to command higher advertising revenues. This could also reduce the usage of voice assistant platforms' alternatives to radio, such as playlists, causing a transfer of value.
	Default route	Similar to findability, this provision could improve user experience of radio listening on voice assistant platforms, potentially increasing listenership of radio on voice assistant platforms.
	Must facilitate	By ensuring access to radio stations on voice assistant platforms, this provision could increase listening on voice assistant platforms.
<i>No cost access</i>	<p>No platforms currently charge for access, but there is no guarantee that this will remain the case in the future. If platforms wanted to extract value from radio stations, they could do so by levying charges for access for radio stations' live services (or seeking a share of advertising inventory, which the platform could sell directly, as a condition of access).</p> <p>The no cost access provision eliminates this possibility, thereby reducing future potential revenue for voice assistant platforms - an opportunity cost in the benign scenario.</p>	
<i>Integrity of service</i>	This provision would prevent voice assistant platforms from inserting or overlaying advertising, which would otherwise lower advertising revenue for radio stations and increase revenue for the platforms. It is an opportunity cost for voice assistant platforms in the benign scenario.	

Assumptions

181. We have had to make some simplifying assumptions in this analysis, which apply to all bundles of impacts. Firstly, due to limitations in the granularity of reported data, we have had to proxy voice assistant platforms using online listening and smart speaker listening. More accurate breakdowns of listening and revenues are not currently available. There is no direct mapping across datasets for voice assistant platforms, so we have clearly stated where we have used alternative definitions in order to estimate these impacts.
182. It is appropriate to use these proxies because this regulation is designed such that it can be applied to new voice assistant platforms that might enter the market in the future. As there is uncertainty around what platforms might enter the market, it would be inappropriate to attempt to construct a more accurate mapping for the current state of the market, as it would fail to capture future developments in voice assistant technology and new products.
183. The other main assumption in this analysis is that we have not monetised the impacts on community radio, as most data is only available for commercial radio. This is the appropriate scope to make a comparison to the counterfactual, as that is also only based on commercial radio revenues. Community radio revenues are much lower than those for commercial radio. In 2022, total community radio income was £12 million,⁶⁷ whereas commercial radio revenues were £740 million,⁶⁸ approximately 60 times larger. Furthermore, community radio is less reliant on advertising for revenue, as it has more diverse income streams than commercial radio. In 2022, the sector average was 30% of income from on-air commercial activities, 26% from grants, and 13% from donations, with the remainder from off-air advertising and sponsorship and merchandise, among other things.
184. Therefore, we expect that the risk to community radio from lost revenue is significantly smaller than that for commercial radio. For proportionality, we have not monetised the impacts on community radio. Instead, we have included a qualitative assessment of the potential impacts on community radio stations for each of these measures. However, this could represent a significant loss of social welfare, as niche community radio stations provide value to communities across the UK, including ethnic minorities.

Bundle: Ensuring availability

185. 'Ensuring availability' is the term we are using to capture the combination of measures that would maintain the existing listener experience on voice assistant platforms, and likely make some improvement to the listener experience. We have bundled these measures because they impact revenue through the same mechanism. This comprises 'findability', 'default route' and 'must facilitate'.

⁶⁷ Ofcom [Communications Market Report 2023](#)

⁶⁸ [AA/WARC estimates, published by Radiocentre](#)

186. We are unable to monetise the impact of this, as we cannot reliably estimate how much listening may increase by making radio stations easier to access. In lieu of a monetised transfer, we use a simplifying assumption that total listening would be maintained, and listening to radio through smart speakers could increase as a proportion of total UK radio listening. We provide an illustrative range of values that the increase in radio listening via smart speakers might take, with the associated transfer and additional benefits. For IA purposes, this is treated as a transfer between platforms and radio.

Benign scenario

187. We assume that improving access to radio and listener experience more broadly would increase the number of listeners choosing to listen to radio via a voice assistant platform, and therefore increase radio revenues as they will be able to command higher advertising revenue if their listenership increases. This will largely be a transfer from voice assistant platforms to radio, for example, as a result of improved algorithms and service directing listeners towards their intended radio station, rather than a similarly-named playlist. We have made some simplifying assumptions in this analysis, due to restrictions with data availability on how advertising prices are determined.

188. First, we use information on radio revenues and total listening on smart speakers in order to calculate revenue per listener hour. In Q4 2022, live radio listening on smart speakers averaged 137 million hours per week, about 13.6% of total live radio listening.⁶⁹ In the same year, commercial radio revenues on online platforms were forecast to be £77.7 million.^{70,71} Data on radio listening is reported quarterly, so aggregating the quarterly data to get a weekly average of listening hours, we find that live radio listening on smart speakers averaged 121 million hours per week. Given that smart speaker listening accounted for approximately 52% of online listening that year, and assuming that the share of revenue generated by smart speakers is proportional to the share of listening hours over smart speakers, then we approximate the revenue per listener hour generated by smart speakers to be £0.006.

189. By improving listener experience on voice assistant platforms, these measures could increase live radio listening on these platforms. A larger audience enables radio stations to command higher prices for advertising, therefore increasing their revenues. To account for uncertainty in how significant the impact on listenership would be, we use a range of values to illustrate the potential increase in listening, and therefore revenues, that could be generated. To illustrate, if listening via smart speakers increased by 10% in 2022, then this could increase radio revenues by £4,017,000, assuming that advertising revenues increase proportionately to increases in listening.

190. Mediatique estimates that by 2035, listeners will consume 760 million hours of live radio per week.⁷² They further estimate that by 2035, IP listening will account for 40% of

⁶⁹ [RAJAR Q4 2022 estimates](#)

⁷⁰ [AA/WARC estimates, published by Radiocentre](#)

⁷¹ This definition is broader than voice assistant platforms, as it includes all online listening. This is our best approximation of the revenue generated by voice assistant platforms

⁷² [Meditique \(2021\), Ownership and use of audio-enabled devices in 2035](#)

all live radio listening, and smart speakers will make up 65% of IP hours. We use data on commercial radio revenues from 2015 to 2022 to build a simple forecast of radio revenues to 2035. Combining this revenue forecast with the Mediatique estimates of future radio listening on smart speakers, we find that by 2035, revenue per listener hour could be approximately £0.011.⁷³

191. Given this approximation, a 10% increase in live radio listening through smart speakers as a result of improved listener experience, could increase radio revenues by £11,459,000 per annum. This illustrative benefit to radio stations is a transfer from voice assistant platforms towards radio. However, this measure could also increase the revenues of voice assistant platforms if the improved user experience means that more listeners choose to listen to radio via a voice assistant platform.
192. It is also possible that some of this transfer could be from larger radio stations to smaller stations with a similar name. Currently, if a request is unclear, algorithms may respond with a clarification request but in some cases may respond with a popular choice, such as a large station. This regulation aims to ensure that voice request responses would prioritise the correct station, which could mean a transfer of value within the radio sector. However, we do not have estimates of the proportion of requests that are directed to the incorrect service, so we cannot make any estimate as to the scale of this transfer.

Table 16: Detailed workings

			<i>Assumptions/source</i>
Total radio listening hours per week (2035 forecast)	a	760,000,000	<i>Mediatique forecast⁷⁴ - assumptions in the report</i>
Online radio listening hours per week (2035 forecast) (a *0.4)	b	304,000,000	<i>Mediatique estimate that online radio listening hours could account for 40% of all live radio listening</i>
Smart speaker listening hours per week (2035 estimate) (b * 0.65)	c	197,600,000	<i>Mediatique estimate that smart speakers listening hours could account for 65% of all online radio listening</i>
Hours of smart speaker listening per year (2035 estimate)	d	10,275,200,000	<i>DCMS calculations</i>

⁷³ All else equal. This model does not account for changes to inflation or other external factors or market trends other than those identified in the calculation above.

⁷⁴ Mediatique (2021): [Ownership and use of audio enabled devices in 2035](#)

Radio revenue on online platforms (2022)	e	£77.7 million	<i>AA/WARC estimates, published by Radiocentre.</i>
Radio revenue on online platforms (2035 forecast)	f	£176.3 million	<i>Linear forecast to 2035 using data published by Radiocentre from AA/WARC on commercial radio revenues from 2015 to 2022.</i>
Radio revenue on smart speakers (f * 0.65)	g	£114.6 million	<i>Mediatique estimate that smart speaker listening hours could account for 65% of all online radio listening. We make a simplifying assumption that revenues are proportional to listening. It is possible that higher revenues could be earned on smart speakers due to the possibility for digitally targeted advertising, however this could apply to all online radio listening, so it is not likely to make a significant difference to the proportion we have used to estimate revenue through smart speakers.</i>
Revenue per listener hour (2035 estimate) (g ÷ d)	h	£0.011	<i>DCMS calculations.</i>
Annual hours of smart speaker listening if 10% increase in listening (2035 estimate) (d * 1.1)	i	11,302,720,000	<i>DCMS calculations.</i>
Change in radio revenue from 10% increase in radio listening hours (2035 estimate) (h * i) - g	j	£11,459,000	<i>DCMS calculations</i>

Additional non-monetised impacts

193. The value to community radio has not been monetised as it is not quantified in the counterfactual, so any transfer of value would not be comparable to the counterfactual. Furthermore, community radio is less reliant on advertising revenues, which these values

are largely drawn from. We can reasonably assume that the value to community radio from 'findability', 'default route' and 'must facilitate' would be positive, and would be significantly lower than the value to commercial and BBC radio stations.

194. The overall impact on radio is uncertain, as it is not clear whether the increased use of smart speakers would increase radio listening overall, displace listening through other devices, or simply maintain current listening. It is likely that the impact is positive for radio, as listening on smart speakers provides opportunities for greater revenue generation than other forms of distribution.
195. There could be further benefits to radio stations from possible developments in IP distribution technology or advertising measurement and aggregation. . If radio broadcasters are able to access richer data collected from listening via IP, then they can build a deeper and sophisticated understanding of the listening habits of the users. This is essential to be able to build and evolve a content proposition that reflects user demand in a dynamic way and therefore supports advertising and programming. IP distribution also enables radio broadcasters to offer content and services which are tailored to their listener base. This could in future allow them to generate additional revenues. By allowing radio stations to choose their default route, this enables them to make the most of these opportunities, and retain more of their revenue.
196. In our stakeholder engagement, one large station group said that these measures would provide important additional security for radio services, making it more commercially viable for broadcasters to commit to investment to provide their services on these platforms. It could also allow for greater innovation and optimisation to benefit consumers, such as improving their ability to provide ancillary services (e.g. extra content and functionality).
197. If improved user experience displaced users from other devices, this could increase the proportion of smart speaker revenue attributable to radio listening, but this is likely to not increase as much as in the counterfactual, as the platforms would be less able to monetise radio listening through access to user data.

Comparison to alternative incremental revenue scenarios

198. These values are more likely to be realised in a high incremental revenue outcome in a benign scenario. This is because in the high incremental revenue outcome, voice assistant platforms are more likely to be focused on generating revenue through their competing services, and radio is more dependent on voice assistant platforms for distribution. Therefore, platforms may be less likely to prioritise access to radio as it is a less important driver of take-up of voice assistant platforms. The impact of ensuring availability could have a tangible cost to platforms if users substitute live radio for competing services, as platforms are more likely to be focused on generating profits from competing services in a non-benign scenario. The impact of ensuring availability is less likely to be a tangible cost to platforms, as they have incentives to make radio stations accessible if they are a core use case for voice assistant platforms.

199. The benefits of ‘must facilitate’ are more tangible in a high incremental revenue scenario, as this is the scenario where voice assistant platforms are less reliant on radio, similar to ‘findability’. If radio stations were not facilitated on a voice assistant platform, then their revenues from those platforms would in effect be zero. In a low incremental revenue scenario, this is unlikely to be a risk for radio stations, as they are a key use case for voice assistant platforms, so the balance of power is more likely to be in their favour.
200. It is uncertain whether the benefits of ‘default route’ would be more or less likely in a high or low incremental revenue scenario. In a low incremental revenue scenario, voice assistant platforms may be more willing to allow radio stations to choose their default route, as they are more reliant on radio as a core use case for their platforms. However, in a high incremental revenue scenario, voice assistant platforms are likely to choose to monetise based on competing services, which could include through a third-party skills or actions point, to benefit from access to user data.

Sensitivity analysis

201.

his analysis is based on the assumption that making radio accessible on voice assistant platforms, easier for listeners to find, and allowing listeners to access radio through their chosen route, would preserve and improve user experience, therefore increasing future radio listening on voice assistant platforms.

202.

These estimates of future audio advertising revenues are likely to be an underestimate, as IP distribution technology offers broadcasters the ability to offer a more valuable advertising proposition through digital advertising services. This is differentiated from standard advertising as it offers greater functionality, measurement capability and greater targeting, meaning that it trades at a premium to standard advertising.

203.

To illustrate the transfer dynamics, we further assumed that the increase in listenership could be 10%. To account for uncertainty in these assumptions, we have shown how this benefit to radio stations would vary in a low estimate where listenership only increases by 5%, and a high estimate where listenership increases by 20%, to show an indicative range. It is possible that listenership could increase by some value outside of this range, however this is our best estimate based on the information available at this time. Recent data from RAJAR has shown that smart speaker take-up has increased faster than the Mediatique forecasts, so it is possible that these values could be underestimating the potential future benefit to radio stations.

	Central Estimate (10%)	Low Estimate (5%)	High Estimate (20%)
Total benefit to radio stations from	£11,459,000	£5,730,000	£17,189,000

improved user experience			
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Non-benign scenario

204. The counterfactual assumes a ‘benign’ scenario - see Figure 6. Compared to the counterfactual, this value enables radio stations to retain a larger share of their revenue, so is a non-monetised benefit to radio stations and an equal opportunity cost to voice assistant platforms. There could be some transfer of value from voice assistant platforms towards radio stations if this measure leads to more users choosing to listen to live radio, rather than other online audio services. . This is unlikely to affect total listening figures, but it could change the composition of listening, such that there is more listening to live radio. In particular, improved algorithms that deliver the correct station in response to a request may lead to reduced use of competing services or an increase in radio users who switch to smart speakers (encouraged by radio stations). However, we cannot estimate these effects. .

205. In a non-benign scenario, there exists a risk that voice assistant platforms could choose to ‘self-preference’ their radio-like services, for example by changing the way the voice assistant algorithm works. In this non-benign scenario, the impact of this bundle of measures could then be a tangible cost to voice assistant platforms and a comparable level of benefit to radio stations, as platforms could have designed algorithms to direct users towards their own services, rather than live radio. Whilst in a benign scenario, we assume incorrect responses to voice requests are simply from algorithms misunderstanding and attempting to deliver the correct response, in a non-benign scenario, we have assumed this is deliberate choice by the platform to change the design of the algorithm so it has that effect.

Comparison to alternative incremental revenue scenarios

206. This is likely to only be a tangible cost in a non-benign scenario, as platforms would be more likely to be focused on generating profits from their audio services and other services carried, including radio. This is more likely to be the case in a high incremental revenue scenario, as platforms are less reliant on radio as a driver of take up. This could mean that the benefit to radio stations is actually higher compared to the counterfactual than we have illustrated here.

207. This is less likely to be a cost to voice assistant platforms in a low incremental revenue scenario, as platforms have an incentive to make radio stations accessible if they are a core use case for voice assistant platforms. Maintaining existing listening would still be a benefit to radio, but this is more likely to be in line with the benign scenario estimates of the transfer.

No cost access

Benign scenario

208. At present, no voice assistant platforms charge radio stations for access. However, there is no guarantee that this will remain the case in the future. If platforms wanted to extract value from radio stations, they could do so by choosing to levy charges for access for radio stations' live services (or seeking a share of advertising inventory, which the platform could sell directly, as a condition of access).
209. To start with calculating the potential value transfer of maintaining the current position between platforms and radio stations, we first use the estimates of radio revenue presented in our counterfactual. These forecasts of commercial radio broadcaster value - calculated by Frontier Economics - are based on a simple trend of radio sector revenues⁷⁵, extrapolated to 2032; and an assumed gross margin.⁷⁶ This also includes the value generated by the BBC, as explained in the counterfactual. Frontier Economics estimate total radio revenues in 2032 as £1.4 billion, with £314 million from voice assistants.⁷⁷
210. We make the assumption that platforms would charge radio stations for access based on a percentage share of revenues, rather than a flat fee. We have assumed the charge would be 30%. This is comparable with the 30% fee for access on various 'App Stores', and Amazon has recently made "30% of the Fire TV Ad-Enabled App's total in-country advertising impressions" the standard rate for carriage on their Fire TV service.⁷⁸
211. As noted above, the value of radio from voice assistant platforms is estimated to be £314 million in 2032. If platforms did choose to charge 30% of the value of radio that can be attributed to voice assistant platforms (estimated at £314 million in 2032), then by 2032 this would mean that platforms could extract an additional £94.2 million from radio stations by that date.
212. The objective of no cost access provision is to eliminate the possibility of voice assistant platforms charging radio stations for access, reducing future potential revenue from competing services. In a benign scenario, where platforms do not charge for access, this measure would incur an opportunity cost on voice assistant platforms of approximately £94.2 million. This represents the opportunity cost of delivering other services and therefore revenue. This is because it explicitly prevents platforms from being able to charge radio stations for access. There is then an equivalent benefit to radio stations of not being charged for access. For IA purposes, this is treated as a value transfer between platforms and radio.

⁷⁵ Commercial radio industry revenues are published by Radiocentre.

<https://www.radiocentre.org/the-audio-market/adrevenues-and-forecasts/>

⁷⁶ The gross margin broadly is reflective of broadcasting margins, and published margins for radio broadcasters. A gross margin of 75% is assumed for radio. It relates to the total revenues minus radio cost of sales (i.e. licensing costs, or direct costs such as competition prizes). It does not relate to operating profit which would subtract operating expenses (costs of presenters, accommodation, transmission and overheads) and costs of depreciation

⁷⁷ Frontier Economics (2023): "[An Assessment Of The Bargaining Relationship Between Radio And Voice Assistant Platforms In The Coming Decade](#)"

⁷⁸ Amazon has recently publicly changed their standard global terms on Fire TV Ad-Enabled Apps with usage of over 30,000 hours per month to require developers to integrate their app with APS and provide Amazon with 30% of the Fire TV Ad-Enabled App's total advertising impressions.
<https://developer.amazon.com/docs/policy-center/fire-tv-advertising.html>

213. A proportion of this value comes from BBC Radio services not being charged for access, as the value of radio is calculated to include an assumption around the value generated by the BBC. Therefore, there is an opportunity cost to voice assistant platforms that would be a transfer to the BBC (a public body). There is a modelling assumption in the research that the public value generated by the BBC is proportionately the same per hour of listening as the value from commercial radio (recognising that this is an imperfect proxy to quantify the “value” generated by the BBC). In Q1 2023, BBC Radio accounted for just under half of all live radio listening hours, with approximately 46.3% of listening. For commercial radio, this figure was 51.4%.⁷⁹
214. Further assuming that these proportions remain fairly stable to 2032, and applying these proportions of listening to the value transfer, we estimate that the benefit to the BBC from preventing voice assistant platforms from charging for access would be approximately £43.6 million. This is public value, rather than commercial value, as the BBC is publicly funded. The benefit to the BBC represents a material cost to business in IA terms rather than a transfer between businesses. This means that the benefit to commercial business is £50.6 million.

Non-monetised impacts

215. There is also a non-monetised impact. The value to community radio has not been monetised as it is not quantified in the counterfactual, so any transfer of value would not be comparable to the counterfactual. We can reasonably assume that the value to community radio from providing free access to voice assistant platforms would be positive, and would be significantly lower than the value to commercial and BBC radio stations.

Comparison to alternative incremental revenue scenarios

216. The counterfactual assumes a ‘benign’ scenario, where voice assistant platforms wouldn’t charge for access - see Figure 6. Therefore, compared to the counterfactual, this value is an opportunity cost to voice assistant platforms through enabling radio stations to retain a larger share of their revenue.
217. As the monetised values in the counterfactual assume a benign scenario, Both high and low incremental revenue scenarios in the counterfactual assume no charge for access for radio stations, so we assume this will not change between the high and low incremental revenue scenarios.

Sensitivity analysis

218. This analysis is based on the assumption that voice assistant platforms would charge radio stations 30% of their ‘value’ (a combination of radio revenues and gross margin) for

⁷⁹ [RAJAR figures, Q1 2023](#)

access to their distribution channels. This value was chosen due to precedent in other markets where these platforms have a degree of market power.

219.

To account for uncertainty in these assumptions, we have shown how this transfer would vary in a low estimate where charges are 10% lower, and a high estimate where charges are 10% higher, to show an indicative range. It is possible that voice assistant platforms would charge more than 30% for access absent regulation, as the market for smart speakers could be argued to be less competitive than other markets where this charge is the standard.

	Central Estimate (30%)	Low Estimate (20%)	High Estimate (40%)
Opportunity cost to voice assistant platforms of 'no cost access' provision	£94,200,000	£62,800,000	£125,600,000

220.

Incorporating the same assumptions around the proportion of revenue generated by the BBC, the opportunity cost that represents a transfer to the BBC is estimated to be between £29,076,000 (low) and £58,153,000 (high).

Non-benign scenario

221. Compared to the benign scenario counterfactual, this value is an opportunity cost to voice assistant platforms through enabling radio stations to retain a larger share of their revenue. In a non-benign scenario, this value is more likely to be a tangible cost to voice assistant platforms, as they may have charged stations for access absent regulation.

Comparison to alternative incremental revenue scenarios

222. Compared to the non-benign counterfactual, this measure is more likely to incur a tangible cost on voice assistant platforms in a low incremental revenue scenario. This is because in this scenario, radio is a key use case for platforms. As platforms generate relatively more of their revenue from radio in the low incremental revenue scenario, they are more likely to try and monetise their investment through radio, rather than from competing audio services (see Figure 5 for detail). Therefore, it is reasonable to assume that the value transfer from voice assistant platforms towards radio in a low incremental revenue scenario is likely to be higher than in a high incremental revenue scenario.

Integrity of service

Benign scenario

223. Currently, no voice assistant platforms have chosen to insert advertising which could be delivered over or before audio streams. However, the shift of bargaining dynamics creates a risk that they might choose to do so in the future, as bargaining dynamics shift in favour of voice assistant platforms. Voice assistant platforms continue to invest in developing their audio advertising proportions, with Google using its “Display and Video 360” to offer audio advertising, which will allow advertisers to place targeted audio advertising with publishers who have inventory.⁸⁰ Amazon has also started to experiment with audio advertising in the UK, and recently promoted the value of audio advertising to service and content providers.⁸¹ If platforms choose to actively favour services that are in direct competition with radio, such as audio advertising, then this could have an impact on radio advertising revenues.
224. To calculate the potential impact of overlaying advertising on radio stations’ revenue, we first use information on radio revenues to forecast potential advertising revenue through voice assistant platforms by 2032. In 2022, commercial radio revenues on online platforms were forecast to be £77.7 million.^{82,83} In the same year, total radio revenues were £740.1 million, with £144.7 million (approximately 20%) from branded content. We assume that the proportion of revenue from branded content is approximately the same for online listening as total listening. Therefore, we estimate that commercial radio revenues from advertising on online platforms totalled £62.5 million in 2022.
225. Using data on commercial radio revenues on online platforms from 2015 to 2022, we can simply forecast radio revenues from online platforms in 2032 to be approximately £152.7 million. If we assume that the proportion of revenue from branded content remains constant over this period, then advertising revenue online is estimated to be £122.9 million in 2032.
226. We then consider the impact that overlaying advertising could have on radio revenues. As detailed previously, Amazon has recently changed their standard global terms on Fire TV apps to charge 30% of the total advertising impressions. We assume that platforms would choose to apply a similar figure to the amount of advertising they would seek to overlay.
227. Therefore, if voice assistant platforms decided to overlay 30% of advertising on live radio, then by 2032 this could incur a cost of £36.9 million for radio (in terms of income

⁸⁰ Google, “Run audio ads easily with new tools in Display and Video 360”

<https://blog.google/products/marketingplatform/360/run-audio-ads-easily-new-tools-display-video-360/>

⁸¹ Amazon recently published a report that concluded that audio advertisements listened to through smart speakers engaged users more than those who listened to the same content on mobile or desktop devices. According to Amazon’s paper, 75% of smart speaker users enjoy listening to ad-supported content on smart speakers more than ads delivered on other media channels or devices. Amazon and Wonderly, “Your emotions on Audio: The science of brand building with sound”, [https://m.media-](https://m.media-amazon.com/images/G/01/AdProductsWebsite/images/blog/2022/Your_Emotions_on_Audio_-_Thought_Leadership_White_Paper_-_Q1_2022.pdf)

[amazon.com/images/G/01/AdProductsWebsite/images/blog/2022/Your_Emotions_on_Audio_-_Thought_Leadership_White_Paper_-_Q1_2022.pdf](https://m.media-amazon.com/images/G/01/AdProductsWebsite/images/blog/2022/Your_Emotions_on_Audio_-_Thought_Leadership_White_Paper_-_Q1_2022.pdf)

⁸² [AA/WARC estimates, published by Radiocentre.](#)

⁸³ This definition is broader than voice assistant platforms, as it includes all online listening. This is our best approximation of the revenue generated by voice assistant platforms

foregone), and an equivalent benefit for voice assistant platforms (minus the costs of setting up and maintaining any services required to offer advertising slots).

228. The objective of the integrity of service provision is to eliminate the possibility of voice assistant platforms engaging in this behaviour and inserting or overlaying advertising, which would otherwise lower advertising revenue for radio stations and increase revenue for the platforms. In a benign scenario, where platforms do not overlay or insert advertising, this measure incurs an opportunity cost for voice assistant platforms of approximately £36.9 million. There is an equivalent benefit to radio stations of being able to retain this advertising revenue, and so this represents a value transfer in comparison to the counterfactual. For IA purposes, this is treated as a transfer between voice assistant platforms and radio.

Table 17: Detailed workings

			<i>Assumptions/source</i>
Total radio revenue (2022)	a	£740.1 million	<i>AA/WARC estimates, published by Radiocentre.</i>
Radio revenue from branded content (2022)	b	£144.7 million	<i>AA/WARC estimates, published by Radiocentre.</i>
Proportion of radio revenue from advertising (2022) (1 - (b ÷ c))	c	80.4%	<i>Assume all radio revenue that isn't from branded content is from advertising</i>
Radio revenue on online platforms (2022)	d	£77.7 million	<i>AA/WARC estimates, published by Radiocentre.</i>
Radio revenue from advertising through online platforms (2022 estimated) (d * c)	e	£62.5 million	<i>Assume that the proportion of radio revenue that is from advertising is the same on online platforms as in general</i>
Radio revenue on online platforms (2032 forecast)	f	£152.7 million	<i>Linear forecast to 2032 using data published by Radiocentre from AA/WARC on commercial radio revenues from 2015 to 2022.</i>
Radio revenue from advertising (2032 estimated) (f * c)	g	£122.9 million	<i>Assume that the proportion of revenue from branded content remains constant over this period</i>

Estimate of revenue loss from overlaid advertising by voice assistant platforms (g * 0.3)	h	£36.9 million	<i>Assume 30% of advertising overlaid - based on precedent set by Fire TV on advertising impressions.</i>
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229. There are a number of simplifying assumptions that we have made in this analysis due to the complexity of pricing advertising on digital platforms. One of the main limitations is that we have not included a sub-category for advertising revenue through IP-targeted advertising. The online radio revenue figures quoted includes targeted in-stream radio/audio advertising sold by UK commercial radio companies, together with online S&P inventory, however our forecasts do not account for the growth of IP-targeted advertising, which we can reasonably assume is likely to grow faster than total radio advertising revenues or the greater value of targeted advertising compared to advertising on analogue or digital radio platforms..

230. We have assumed that future IP-targeted advertising is likely to generate higher revenues than standard radio advertising, as it is tailored to that specific audience member listening on a voice assistant platform, rather than traditional radio advertising, where price is determined largely by audience size and age. Digital targeted audio advertising currently trades at a premium, as there is a higher return on investment. Industry stakeholders have suggested that the Cost per Impression⁸⁴ is around two to seven times higher for digital advertising relative to standard advertising. Therefore, it is likely that future advertising revenues from listening on voice assistant platforms are likely to be higher than estimated in this analysis.

Non-monetised impacts

231. There is also a non-monetised impact. The value to community radio has not been monetised as it is not quantified in the counterfactual, so any transfer of value would not be comparable to the counterfactual. We can reasonably assume that the value to community radio from ensuring integrity of service would be positive, and would be significantly lower than the value to commercial and BBC radio stations. This is in part due to community radio's revenues being significantly lower than commercial radio revenues. It is also a result of how community radio is funded. It relies less heavily on advertising revenue, instead receiving a significant share of funding through grants and donations. In 2022, the proportion of community radio's revenue that was from on-air advertising was approximately 30%.

232. We have not monetised the potential value transfer specific to IP-targeted advertising, as data on radio advertising revenues from digital platforms is not reported publicly at such a granular level. However, we expect that the opportunity cost for platforms is likely to be higher than we have estimated, as digital advertising trades at a premium, as described above.

⁸⁴ Cost Per Impression (CPM) relates to the cost to advertisers of 1000 impressions from users

Comparison to alternative incremental revenue scenarios

233. Voice assistant platforms have a strong incentive to avoid harming the value of their service in the eyes of users by inserting excessive amounts of intrusive advertising (for example, by inserting advertising into radio services midstream). However, it is not certain what the future strategies of platforms will look like.
234. The counterfactual assumes a 'benign' scenario where integrity of radio services would not be threatened by voice assistant platforms - see Figure 6. Therefore, this intervention has no tangible costs in a benign scenario, but it does take away the option for platforms to overlay advertising, so it is an opportunity cost.
235. As the monetised values in the counterfactual assume a benign scenario, both incremental revenue scenarios in the counterfactual assume no overlaying or inserting of advertising. In the low incremental revenue scenario, voice assistants' share of audio advertising profits grows at a slow pace, whereas in a high incremental revenue scenario, digital platforms are able to generate revenues from audio advertising, but not at the expense of radio advertising. Therefore, there is no significant difference in the value exchange between these incremental revenue scenarios.

Sensitivity analysis

236. This analysis is based on the assumption that voice assistant platforms would choose to overlay advertising equivalent (in terms of quantity) to 30% of radio's advertising revenue. However, there is a high degree of uncertainty around the quantity of advertising that voice assistant platforms would choose to overlay in this scenario, some of which is dependent on which incremental revenue scenario materialises.
237. To account for uncertainty in these assumptions, we have shown how this transfer would vary in a low estimate where voice assistant platforms overlay advertising equivalent to 20% of radio's advertising revenue, and a high estimate where voice assistant platforms overlay advertising equivalent to 40% of radio's advertising revenue. It is possible that voice assistant platforms could overlay a higher proportion of advertising, but it is difficult to estimate how high this value could be.

	Central Estimate (30%)	Low Estimate (20%)	High Estimate (40%)
Opportunity cost to voice assistant platforms of 'integrity of service' provision	£36,900,000	£24,600,000	£49,100,000

Non-benign scenario

238. The counterfactual assumes a 'benign' scenario where integrity of service would not be threatened by voice assistant platforms. In a non-benign scenario, this is more likely to be a tangible cost to voice assistant platforms as they might choose to overlay or insert advertising into live radio streams. This is particularly likely in the high incremental revenue scenario.

Comparison to alternative incremental revenue scenarios

239. The likelihood that voice assistant platforms would overlay or insert advertising depends on potential future revenues from audio advertising, and as described in Figure 5, one of the differences between the low and high incremental revenue scenarios is how revenues from audio advertising are expected to grow. In a situation where radio remains a core use case for voice assistants, platforms are more likely to attempt to monetise their investment by actions such as charging a commission based on profits radio receives for advertising (the low incremental revenue scenario). This is similar to the cost described above as the counterfactual for 'no cost access', as this charge could be based on advertising revenue.

240. In a non-benign scenario, platforms are more likely to instead choose to overlay advertising if it could generate more revenue than they could get from taking a proportion of radio advertising revenues. This is the case in the high incremental revenue scenario, where audio advertising is an important driver of incremental growth for voice assistants. If voice assistants were to compete in audio advertising, this could be harmful for radio. The opportunity cost of integrity of service is most likely to be a tangible cost in the non-benign, high incremental revenue scenario.

241. There is scope for greater risk for radio if voice assistant platforms offer first-party advertising if they overlay or interrupt radio's audio advertising, or if digital platforms leverage the large amount of data they collect to offer highly targeted advertising. However, it is too early to tell which of these four scenarios is more likely.

Summary

242. The aggregate impact of the value transfer from voice assistant platforms to radio is difficult to assess but it is likely to be some value between the smallest impact identified in this analysis and the sum of these impacts. As the impacts of measures are bundled, and they all rely on estimates of future radio revenues (largely from advertising and sponsorship), they are not mutually exclusive. By protecting radio revenues from the risk of a value transfer, although the impacts of these measures are realised through different mechanisms, there is significant overlap in the impact they have. Therefore, we cannot combine them to estimate the aggregate impact of the value transfer.

243. We have presented the aggregate impact of the value transfer as a range of values, based on the benign scenario (to reflect the current position), with a qualitative

description of how these values could differ in a non-benign scenario. Overall, there is likely to be some substitution between integrity of service and no cost access in a non-benign scenario, depending on the incremental revenue scenario, so we could reasonably expect the total cost to voice assistant platforms to be lower than the high estimate. The only significant difference to the potential range of values between the low and high incremental revenue scenarios in a benign scenario is the impact of the 'ensuring availability' bundle. The potential range of values for the value exchange that is being reversed by these measures is detailed in Table 18. This does not account for any loss of value due to lower supply or access to radio.

Table 18: Potential range of aggregate impact of interventions on value transfer (in 2032, per annum)

	Low incremental revenue scenario (for Voice Assistants)	High incremental revenue scenario (for Voice Assistants)
Benign (for radio)	<p>Opportunity cost for voice assistant platforms.</p> <p>Low estimate: £36,900,000 <i>(estimate for integrity of service)</i></p> <p>High estimate: £131,100,000 <i>(aggregate impact of no cost access and integrity of service measures)</i></p>	<p>Opportunity cost for voice assistant platforms.</p> <p>Low estimate: £36,900,000 <i>(estimate for integrity of service)</i></p> <p>High estimate: £142,559,000 <i>(aggregate impact of no cost access, integrity of service and ensuring availability measures)</i></p>
Non-benign (for radio)	<p>In a non-benign scenario, we would expect this to be a tangible cost to voice assistant platforms.</p> <p>The impact of ensuring availability is less likely to be a tangible cost to platforms.</p> <p>The impact of no cost access is more likely to be a tangible cost to platforms, as in a low incremental revenue scenario they are more likely to monetise their investment through radio, as radio is still a key use case for platforms</p> <p>The impact of integrity of service is unlikely to be a</p>	<p>In a non-benign scenario, we would expect this to be a tangible cost to voice assistant platforms.</p> <p>The impact of ensuring availability is more likely to be a tangible cost to platforms and benefit to radio, as platforms are more likely to be focused on generating profits from competing services. Therefore, in the counterfactual, platforms would be less likely to prioritise access to radio as it is a less important driver of take-up of voice assistant platforms.</p> <p>The impact of no cost access is less likely to be a tangible cost</p>

	<p>tangible cost to platforms, as voice assistant platforms are unlikely to overlay or insert advertising - they are more likely to charge radio stations for a share of their advertising revenue instead.</p>	<p>to platforms, as they are more likely to focus on competing audio services rather than extracting value from radio.</p> <p>Integrity of service is likely to be a tangible cost, as voice assistant platforms are more likely to overlay or insert advertising if audio advertising is an important driver of incremental growth for voice assistants.</p>
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Summary

Business Impact Target Calculations

As set out in Section 1, it has not been possible to provide these calculations.

Sensitivity Analysis

Sensitivity analysis has been built in throughout this cost-benefit analysis. Although these values are only indicative, any impact assessments that follow will include detailed sensitivity analysis on the costs to business.

Risks and assumptions

Assumption	Evidence	Risk
<p>Listening to radio online will continue to grow as a proportion of total radio listening as new voice assistants and other connected devices take share from traditional FM or</p>	<p>Listening to radio online was at 24% (with smart speaker listening at 14%) as at Q3 2023. As at Q4 2016 (around the time the first smart speaker was launched in the UK), online</p>	<p>The growth of online listening may slow or stop entirely. In those circumstances, the provisions in this legislation may be redundant (given that platforms will only be</p>

<p>DAB radio and from other forms of IP radio listening.</p>	<p>radio listening was at 7%.</p> <p>Forecasts made by Mediatique in 2020 for the Digital Radio and Audio Review were that 32-40% of all radio listening would be online by 2035, with smart speakers accounting for 22-28% of listening. These forecasts are already looking conservative.</p>	<p>designated if they have a significant number of users accessing radio).</p>
<p>There is a risk that we will end up in a non-benign scenario</p>	<p>The bargaining power is likely to shift as IP listening increases, enabling voice assistant platforms to set the terms of trade. Mediatique forecasts as above show that listening is shifting to IP at a rapid pace.</p> <p>Evidence of potential risks from the TV market: The terms recently imposed on TV services by Amazon were that any ad funded content provider has to provide Amazon with 30% of the “total advertising impressions in each such country.” (Select Committee Q187).</p>	<p>The measures in this regulation are designed to protect radio against future risks. There is a chance that these risks would not materialise absent regulation. However, the evidence used in our analysis suggests that this risk is tangible, and that the value transfer could be substantial even in a benign scenario.</p>
<p>Platforms should be able to make stations findable</p>	<p>UK radio stations are currently generally easy to find on request</p>	<p>Stations may choose names that are similar to other existing media, or otherwise make it difficult for listeners or platform algorithms to identify them. However, it will be in stations’ interests to choose unique names, and to</p>

		educate listeners (for example through their broadcast services or on their websites) about how they can be reached on connected devices.
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Unintended consequences

244. It is possible that, as a result of this regulation, platforms will decide to limit their investment into, and innovation in relation to, connected audio devices and, as a result, radio listening declines or declines at a faster pace than it would have done under the no-change option. However, we do not consider that this outcome is likely. The requirements are narrow, and broadly reflect the status quo. They do not prevent the platforms and stations from reaching innovative agreements such as joint advertising campaigns (as they have to date) or developing new types and styles of audio content. Indeed, to date the availability of radio on connected audio devices has brought listeners to these devices, and therefore encouraged and supported these innovative arrangements in a way that has been mutually beneficial.
245. It is possible that as a result of this regulation, large voice assistant platforms may increase their share of the market. The regulations may improve user experience by making radio stations easier to find and ensuring that they are available. Smaller platforms do not have to comply with the regulations, and so they may choose not to make these changes that could improve user experience. Therefore, their offering might become less competitive relative to large voice assistant platforms, drawing more users towards the larger platforms. This could also have a negative impact on consumer choice. If it makes the large voice assistant platforms even more attractive, then smaller platforms may struggle to compete and even drop out of the market. However, non-designated platforms may decide to adhere to the requirements as de facto industry standards (even though they are not mandatory) and compete on the basis of having better products or services.
246. Finally, there is a risk that the requirements reduce the space for third party aggregators (who are not subject to requirements in the Bill) to facilitate the integration of radio services across smart speaker platforms leading to less choice and innovation and impacting on commercial opportunities for radio stations. This is unlikely to affect consumer choice, given there will be little effect on the services consumers receive, but could reduce opportunities for some stations, for example smaller stations, to be able to pursue commercial agreements that would drive useful additional revenues.

3.0 Wider impacts

Small and Micro Business Assessment (SaMBA)

Radio

247. Some radio stations would be classed as small and micro businesses. Whilst the commercial radio market is dominated by large radio companies owning hundreds of stations between them, there is a tail of commercial and community radio stations that are predominantly local or niche.
248. Ofcom estimates that there are currently around 275 analogue commercial radio stations in the UK.⁸⁵ We use this figure as an approximation of the number of commercial radio stations that would be in scope of the regulations. 27 of these are independent stations, and there are 18 station groups. Around 175 stations are represented by the 3 large groups - Global, Bauer and Wireless (part of NewsUK). There are a further 9 medium sized groups representing 64 stations and 33 small groups or independent stations.⁸⁶
249. There is no precise data on the proportion of AM/FM licence holders that are small and micro businesses, however Radiocentre estimate that most AM/FM licence holders fall into these categories. Using the definition in the better regulation framework of small businesses as those employing between 10 and 49 full-time equivalent (FTE) employees, and micro businesses employing between 1 and 9 employees, we estimate that most medium and small groups (excluding a few of the larger 'medium size groups'), and all independent stations, are likely to be small or micro businesses in terms of number of employees.⁸⁷ There are three medium size station groups with fewer than 5 stations. Combining this with the number of small and micro stations, we estimate that there are approximately 36 unique operators that are likely to be small or micro businesses in the commercial radio sector, covering approximately 45 licences that are in scope of the regulation. This is equivalent to roughly 80% of businesses, covering 16% of total AM/FM licences. We would expect all of these businesses to benefit to some extent from this policy intervention, as they aim to ensure that listeners can access their live radio streams, and offer protection both to radio revenues from advertising, and against charges for access.
250. Ofcom estimates that there are around 319 analogue community radio stations in the UK.⁸⁸ Through our engagement with a sample of community radio stations, we found that

⁸⁵ Ofcom provides a list of all analogue radio stations, including their frequency, licensee and which group they belong to: <http://static.ofcom.org.uk/static/radiolicensing/html/radio-stations/analogue/analogue-main.htm>

⁸⁶ There is no set definition for small and medium station groups. This assumption is an estimate based on anecdotal sector knowledge using Ofcom data. There is no dataset available to confirm this. These station groups are still likely to be classified as small businesses in terms of employees and revenue.

⁸⁷ According to anecdotal sector knowledge, many radio stations have fewer than 10 employees. Therefore, if we assume that the average station has 10 employees, any group representing 5 or more stations will not be classified as a small or micro business.

⁸⁸ Ofcom: [Media Nations \(2022\)](#)

most stations have fewer than 10 employees. Furthermore, Ofcom data from 2023 found that 87% of community radio stations had less than £100,000 of income, and 98% had less than £250,000.⁸⁹ Only five community radio stations had over £250,000 in income. Community radio income consists of on-air commercial income, grants, donations, off-air advertising and sponsorship, and other income. There is no comprehensive information on the number of employees for community radio stations, they are mostly staffed by volunteers, and they typically have less than £250,000 in revenue per annum, so we assume that all community radio stations are either small or micro businesses.

251. Through engagement with a sample of commercial and community radio stations, it became clear that most stations are unsure of the costs they may incur as a result of this regulation. Most respondents said that they would go to their industry body for more detailed information and guidance on what to do following the regulation, so we expect that any costs from trying to understand the regulation and implications for their business are likely to be small.

252. The only monetised cost to small commercial and community radio stations is the familiarisation cost. We estimated the total familiarisation costs by assuming a single cost for station groups, as efforts would not need to be duplicated by all stations represented by these groups. Of these groups, we estimate that 352 unique operators would be classified as small or micro businesses. This means that there is a familiarisation cost for small businesses, estimated to be £55,741 - approximately £158 per business. This is in proportion to the £59,162 total familiarisation cost for all radio stations, as small businesses comprise around 97% of all unique operators.

253. Absent regulation, there is potential for small domestic radio stations to face increasing challenges reaching consumers through smart speakers. **Therefore, small and micro businesses in the radio sector are expected to benefit significantly from these regulations.** They will benefit through increased protections against the potentially harmful actions of voice assistant platforms, and some of the share of the reversal of the value transfer will accrue to small and micro businesses in this sector. Given risks that smaller radio stations could be or are negatively affected, there are potentially benefits associated with securing the prominence and inclusion of their content which would increase the audio content diversity of smart speakers. This could potentially benefit smaller stations more than larger stations, as they are potentially more at risk from some of the harmful behaviours this regulation aims to prevent, such as ensuring findability.

254. **Radio stations do not come into scope of the regulation, so a small and micro business exemption is not required.** Even though we expect SMBs to be beneficiaries of this policy, they will incur familiarisation costs. We are working with Radiocentre on the commercial radio side, and organisations including the Community Media Association and the UK Community Radio Network on the community radio side, to ensure that impacts on SMBs are appropriately considered in the development of this regulation.

Voice assistant platforms

⁸⁹ Ofcom [Communications Market Report 2023](#)

255. Voice Assistant services in the UK are principally provided by large digital platforms (“Voice Assistant platforms”) such as Google, Amazon (Alexa) and Apple (Siri). While designation of a given platform will be determined following advice from Ofcom, these three organisations are the likeliest to be affected by the legislation at this stage and to incur costs from the partial value exchange away from smart speaker platforms towards radio stations.
256. The intention of this regulation is to capture the largest platforms that have a large share of the voice assistant platform market. Smaller players such as Sonos are not intended to come into scope. **The government has not considered any SMB exemptions, as there are no small and micro businesses in scope of the requirements.** Other organisations may come into scope in the event that they become significant players in the voice-activated connected audio device market.
257. Therefore, these regulations are not expected to disproportionately impact small or micro businesses in this sector. Ofcom will only designate sufficiently large voice assistant platforms as ‘in scope’ of the regulation. Designation decisions will be made at the secondary legislation stage.

Medium-sized business assessment

258. The smart speakers regulations will not negatively impact medium-size businesses as only large voice assistant platforms will come into scope of the regulation. These are large, multinational corporations with thousands of employees, and so do not fit the definition of a medium-size business.
259. Some radio stations are likely to be classed as medium-sized businesses. Medium sized radio stations may benefit from the regulations through the same mechanism as small and micro businesses in the sector, and likely to the same degree.
260. Therefore, taken as a whole, these regulations are not expected to disproportionately impact medium-size businesses.

Equality impacts

261. The smart speakers regulations are not expected to have any negative impact on individuals with protected characteristics. Given the risks that smaller radio stations could be negatively affected by the actions of large voice assistant platforms, there are potentially benefits associated with securing the inclusion of their content, which would increase the audio content diversity of smart speakers. In addition, while there remains work to do with the radio sector in relation to diversity and inclusion, there are around 50 commercial and community stations specifically serving ethnic minority communities. Furthermore, radio listening is important to older and disabled audiences, and so this regulation could benefit these groups through protections for live radio.
262. RNIB reports that the vast majority, 93%, of blind and partially-sighted people listen to the radio. A report by Wavelength, a charity which gives media technology to lonely

people living in poverty, shows that people felt less lonely after receiving a radio. In March 2020, Wavelength received over 9,000 applications in response to a radio distribution scheme for the over-70s who were vulnerable and self-isolating, which highlighted both how valuable radio is for older listeners but also how for many, even the most everyday technology is not readily accessible. The specialist organisations also reported that some older listeners are reluctant to move to IP listening, with a lack of understanding of technology and the cost of broadband cited as potential barriers. For those that had moved to listening over IP, smart speakers were viewed as a positive development, especially for those with visual impairments. There was some concern raised around both privacy issues and the potential impact of unregulated online environments on already vulnerable listeners. All groups were reassured that listening to live radio is forecast to remain robust in the future.

Trade implications

263. These measures are unlikely to have an impact on international trade or investment. The measures do not impact the value of imports or exports of smart speakers or other voice assistant platforms. The intention of the measure is not to restrict imports of smart speakers and other voice assistant platforms, nor to undermine mutually beneficial commercial arrangements for other services beyond live, licensed content. Furthermore, the market structure and composition is unlikely to change, as the current market players are all large and established. It also does not impose different requirements for domestic and foreign businesses in the market. If a domestic business chose to produce a voice assistant platform, it would be subject to the same requirements as the current businesses in the market.
264. There may be some potential negative effects on investment if companies become less likely to invest in the voice-activated connected audio device market as a result of these regulations reducing the potential revenues of voice assistant platforms. However, these measures have been designed to have a narrow focus and will apply only to the largest platforms, in order to mitigate negative effects whilst achieving impact in the radio sector. Therefore, we expect these impacts to be small.

Innovation Test

265. The policy intent is not to impact the freedom that platforms have to innovate. However, it is possible that there could be some impact on future innovation due to the constraints on platforms to monetise the provision of access to radio services. The smart speakers regulations could impact the freedom that these platforms have to innovate in the future, potentially leading to loss of future revenues for these platforms. However, we have so far not been able to find any evidence on these impacts. These provisions are relatively narrow and reflect the current arrangements between platforms and radio groups. They do not preclude innovative partnerships between platforms and stations,

such as the work that Amazon has done with Heart⁹⁰, or its collaboration with Magic on an interactive holiday promotion⁹¹.

266. There will be some positive impact on innovation through restricting behaviours that could be harmful to radio stations. For example, the ‘findability’ requirement⁹² could give platforms the incentive to improve their algorithms in order to generate more accurate responses to speech commands. It is possible that this could have wider reaching benefits in the range of uses for voice assistant platforms, such as speech-to-text technology. It could also lead to other technological advancements in the area. In our engagement with commercial and community radio stations, it was recognised that Radioplayer offers an option to automatically suggest local radio stations in the area. If smart speakers incorporated this technology, it could improve user experience.
267. The wording of this intervention to cover ‘voice assistant platforms’ leaves it open to apply to other technology markets which voice assisted technologies could move into in the future, beyond smart speakers and in-car infotainment systems. Therefore, there could in the future be some wider impacts on these markets. However, at this stage, any such impacts are likely to be largely limited to smart speakers and (potentially) in-car infotainment systems, as these are the environments in which it is most likely that the platforms will be facilitating access to radio for a significant number of users.

Competition

Voice-activated connected audio device market

268. As summarised in the DMU Impact Assessment⁹³, the characteristics of some digital markets lead them to quickly tip in the favour of one, or a few, firms. The market power held by a small number of firms is undermining effective competition, stifling growth and innovation, and giving rise to consumer harms in these markets. These same firms are also the largest players in the UK smart speaker market. A number of the measures for smart speakers are aimed at intervening in the market to improve competition given the recognised market imbalances.
269. This measure does not intend to restrict the number or range of suppliers in the market. Currently, a few larger providers of voice assistant platforms already have market power. In the counterfactual, voice assistant platforms could gain additional revenues from interoperating with radio stations. This measure does not prevent these platforms from having a mutually beneficial relationship with radio stations. However, it does intend to protect radio stations from potentially harmful activities that platforms could engage in in a ‘non-benign’ scenario. These include overlaying or inserting

⁹⁰ Recently, Heart and Amazon have teamed up for a joint advertising campaign across TV, audio, outdoor and social.

⁹¹ <https://radiotoday.co.uk/2023/02/magic-radio-runs-holiday-themed-interactive-smart-speaker-promotion/>

⁹² To ensure that listeners are provided with their requested station in response to a clear request for that station

⁹³

advertising in live radio streams; charging radio stations for access to their platform; and making it more difficult for listeners to find the stations they want.

270. By providing a range of protections to radio stations, these measures aim to prevent voice assistant platforms from gaining additional revenues at the expense of radio stations. By reducing the potential benefits of entering the voice-activated connected audio device market and increasing requirements on platforms, these measures could discourage new entrants. However, these regulations also limit the competitive advantage that big players have, as these regulations are designed specifically to target the biggest players in the market.
271. Furthermore, these measures are unlikely to limit competition in the market for voice assistant platforms, as high barriers to entry mean that it is expected that the platform market will not become more competitive without regulation, even if revenues begin to increase. High barriers to entry prevent new entrants creating the competition needed for the market terms to be set on a more mutual basis without government intervention. Therefore, we do not anticipate that these regulations will negatively affect existing or future competition.
272. On balance, there is a possibility that by reducing future revenues for voice assistant platforms, these regulations act as a disincentive to new firms trying to enter the market. This could limit the choice in platforms for consumers if new entrants do not join the market. However, the barriers to entry are already high in this market, as described previously, so it is unlikely that this regulation would be the most substantial barrier for new entrants wanting to join the market.
273. Furthermore, these provisions only apply to platforms which a significant number of people use to access radio and are designated as such following advice to the Secretary of State from Ofcom. So, by the time a new entrant could be designated to be within scope of this regulation, it would likely already be making substantial revenues, with scope to earn additional revenue through complementary services, collaboration with radio stations, and other routes, as platforms currently do in this market.

Radio market

274. These regulations are likely to make the radio sector more attractive to new entrants, as they will provide greater protections to potential future revenues. These regulations ensure that radio stations will not be charged for access for carriage on designated RSS platforms, and that their live radio streams won't be overlaid by advertising. Furthermore, the 'findability' provision provides additional benefits to new entrants who are likely to be smaller radio stations, as it is designed to ensure that algorithms become more accurate in their responses to voice commands for radio listening. This will enable these smaller stations to have larger audiences, and therefore earn greater advertising revenues.

4.0 Post Implementation Review/Monitoring and Evaluation Plan

275. The government responded to the recommendations of the Digital Radio and Audio Review in April 2022. In that response, the government concluded that the time was not yet right for any formal switch-off of analogue (AM/FM) radio services, and that this was unlikely to change before 2030 at the earliest.
276. The Secretary of State has a continuing obligation, under s67 of the Broadcasting Act 1996, to keep the radio market under review in relation to the shift from analogue to digital radio, and confirmed in April 2022 that the government would look again at the state of the radio market in 2026. The scope and form of such a review would need to be determined nearer the time.
277. The 2026 review point will be an early opportunity to assess how the market has changed since this legislation has been announced. It is expected to consider listening trends, how these have changed since 2021 and how the relationships between radio and its distribution mechanisms (including voice assistant platforms) have evolved in line with changes in listener behaviour. The Review will also be informed by updated research and by engagement with a wide range of stakeholders from across radio, audio, and the tech sector.
278. The 2026 review point is likely to be too early to fully assess the impacts in relation to this legislation. However, the review would provide an early opportunity to assess the state of the market from the perspective of stations, platforms and listeners and will provide comprehensive insight into market developments. The review can also, subject to its terms of reference, look at the implementation and initial impacts of the new measures as of that point, and whether any further decisions are needed.
279. The table below sets out potential evaluation questions that DCMS could address, following a proposed set of outcomes. The table also provides potential metrics and approaches we could use to measure these evaluation questions.

Monitoring and evaluation areas of interest

Outcome	Evaluation Questions	Potential Metrics/Approaches
Commercial and community radio revenues are not detrimentally impacted by interoperating with voice assistant platforms.	<p>Do commercial and community radio revenues follow a similar trajectory to at present?</p> <p>What share of radio revenues are attributable to voice assistant platforms, and how does this differ from our counterfactual?</p> <p>Are voice assistant platforms</p>	<ul style="list-style-type: none"> • Monitor commercial radio sector revenues and forecasts (Radiocentre, AA/WARC) • Monitor community radio revenues (Ofcom Communications Market Report) • Commission updated research on the value exchange to assess how

	engaging in any of the harmful activities that this regulation aims to prevent, or other harmful activities?	<p>this has changed from our counterfactual.</p> <ul style="list-style-type: none"> Continued engagement with Radiocentre, Community Media Association, UK Community Radio Network and other industry bodies to gather information on experiences of radio stations. Gather information from Ofcom on enforcement actions taken. Comparison to other markets, both domestically and internationally (see below for more detail)
Overall radio listening levels are maintained at broadly current levels.	<p>Is radio listening at broadly the same level as at present?</p> <p>What impact does listening via voice-activated connected devices have on overall radio listening levels?</p>	<ul style="list-style-type: none"> Monitor total hours of radio listening (RAJAR) Monitor hours of radio listening by device (RAJAR, Ofcom Tech Tracker)
Radio content is easy to find on voice-activated connected devices, enabling consumers to benefit from the positive attributes of radio.	<p>Are voice assistant platforms generating more accurate responses to speech commands?</p> <p>Are audiences finding it easier to find commercial and community radio content on voice-activated connected devices?</p>	<ul style="list-style-type: none"> Continued monitoring of the size and diversity of the radio market Future Ofcom research on market developments Engagement with industry for 2026 review of radio market

Monitoring

280. We will continue to monitor the UK radio and audio market and will separately track public data sources including RAJAR's regular listening reporting and Ofcom's annual tech tracker surveys, which will enable an ongoing informed assessment of the extent to which these provisions are having their intended effect. This will also enable us to compare realised figures to the projections cited in this impact assessment, such as updating the various forecasts by Mediatique on the speed of adoption of smart speakers.

281. We expect that Ofcom will continue to commission research on smart speaker listening building on recent studies. Ofcom is also expected to commission specific research on market developments and trends in order to build a detailed evidence base to support and inform its advice to the government on the designation of platforms used by significant numbers of radio listeners and to consider whether other smart speaker uses raise any specific competition issues.

282. We will also continue to track radio and audio consumption trends in similar markets. One of the options here is the local news market. This is a market that has faced a similar disruption, with platforms acting as gatekeepers for news publishers, and had no protections from the negative impacts of this disruption. By observing what has happened, and continues to happen, in this market, we can provide a valuable comparison to the radio market. The [Public Interest News Foundation maps local news coverage across the UK](#), which highlights the high degree of variation in coverage in the local news market. We are currently working with academics to discuss approaches to develop this work further, including tracking developments over time, and assessing the cost to local societies of reduced local news coverage, which will hopefully provide a rich comparison to the radio sector.

283. International markets also provide opportunities for a natural experiment given that smart speaker technologies are being adopted in a large number of other countries and where there is also a risk to the long-term sustainability of local radio services. We will continue to track international market trends, particularly in those markets which shape the use of voice assistant technologies in cars and other vehicles, and compare these to the UK. Australia is likely to be the closest country to the UK in terms of similarity of the commercial radio sector (though its public broadcaster has a smaller share of listening compared to the UK), so is a good comparator, as is the United States.

284. We will also look to compare the UK market to European countries, including France, Germany, Italy and the Scandinavian countries. However, smart speaker uptake is currently lower in Europe than in the UK, and the measures in EU's Digital Markets Act (which does cover voice assistants) may have indirect impacts on the market, so we will look to compare the impacts of these different forms of legislation. It is also important to recognise that there could be some knock-on impacts in international markets from the UK regulating voice assistant platforms. Our engagement with some larger radio groups that have a presence in these markets, for example Bauer Media, will help inform us of impacts beyond the UK and enable us to draw these comparisons.

Formal review point

285. We plan to do a review of this legislation within 5 years of implementation. At that point, we plan to review the economic assessment prepared by Frontier Economics to reassess the extent to which the transfer of value between platforms and radio stations has changed as a result of these measures. This review will look at the market dynamics following decisions to designate platforms and track the revenues of both voice assistant platforms and radio, and the transfer of value, to assess how updated estimates compare to the counterfactual reported in this impact assessment. This approach should provide us with an opportunity to assess whether these measures have been successful. However, it will be difficult, given the dynamic nature of the market, to attribute specific revenue impacts to these measures, as there are other prevailing trends in the radio market that could affect total revenues and revenues attributable to radio or platforms, so any changes in estimates will have to be carefully caveated.

286. The optimal time to review this analysis will be 2-3 years after the first platforms are designated, to allow time for the full effects of the measures to feed through and to separate any effects from wider market changes resulting from changes in listener

behaviour and from other economic factors affecting the UK radio industry. Therefore, we expect this review point to be towards the latter half of the 2020s.