

**EXPLANATORY MEMORANDUM TO
THE TELEVISION MULTIPLEX SERVICES (RESERVATION OF DIGITAL
CAPACITY) ORDER 2008**

2008 No. 1420

**THE MULTIPLEX LICENCE (BROADCASTING OF PROGRAMMES IN GAELIC)
ORDER 2008**

2008 No. 1421

1. This explanatory memorandum has been prepared by the Department for Culture, Media and Sport (“DCMS”) and is laid before Parliament by Command of Her Majesty.

This memorandum contains information for the Joint Committee on Statutory Instruments.

2. **Description**

2.1 Digital terrestrial television (i.e. services received via a conventional aerial, rather than cable or satellite, for instance) is broadcast by means of six “television multiplex services”. The Television Multiplex Services (Reservation of Digital Capacity) Order (“the Multiplex Order”) modifies provisions in Part 1 of the Broadcasting Act 1996 to enable the Office of Communications (“Ofcom”) to (i) reserve digital capacity (i.e. space in the radio spectrum for broadcasting digital services) on television multiplex services, (ii) hold a competition for the allocation of such capacity to certain public service broadcasters for the carriage of specified services, and (iii) grant public service digital television programme licences in respect of those services.

2.2 The Multiplex Licence (Broadcasting of Programmes in Gaelic) Order (“the Gaelic Order”) makes amendments to article 2 of the Multiplex Licence (Broadcasting of Programmes in Gaelic) Order 1996 to provide that Ofcom may impose conditions on the licence holder of Multiplex A to carry Gaelic programming in defined periods of the day. “Gaelic” here means the Gaelic language as spoken in Scotland.

3. **Matters of special interest to the Joint Committee on Statutory Instruments**

3.1 The Multiplex Order is made under section 243(1) and (3) of the Communications Act 2003. This is the first use of powers under section 243, although a similar order was made under comparable powers in section 28 of the Broadcasting Act 1996 (section 28 was repealed by section 406(7) of, and Schedule 19 to, the Communications Act 2003). See the Independent Analogue Broadcasters (Reservation of Digital Capacity) Order 1996 (SI 1996/2760), as amended by the Independent Analogue Broadcasters (Reservation of Capacity) (Amendment) Order 1999 (SI 1999/1996).

3.2 The Gaelic Order is made under section 32 of the Broadcasting Act 1996. Subsection (1), taken together with subsection (9), both as amended, make it clear that an Order under this section can only be made in respect of a multiplex licence in respect of which the Secretary of State **has made** an order under section 243(3) of the 2003 Act (emphasis added). The DCMS can confirm that the Secretary of State made the Multiplex Order first, followed by the Gaelic Order.

4. Legislative Background

4.1 Part I of the Broadcasting Act 1996 concerns digital terrestrial television broadcasting and provides, inter alia, for the licensing of (i) multiplex services and (ii) specified types of digital services. Section 28 of the 1996 Act gave Order making powers to the Secretary of State in relation to, inter alia, the reservation of spectrum capacity for specified broadcasters. Section 243 of the Communications Act 2003 is, in broad terms, the replacement for section 28, and allows modifications to be made, by Order, to specified provisions of the 1996 Act which concern (i) licences granted under Part 1 of the 1996 Act, and (ii) the awarding and granting of such licences.

4.2 Section 32 of the Broadcasting Act 1996 concerns the digital broadcasting of Gaelic programmes. The Multiplex Licence (Broadcasting of Programmes in Gaelic) Order 1996 (“the 1996 Order”), made under section 32, imposes an obligation on the holder of the multiplex licence, granted in respect of the frequency on which digital capacity is reserved for the broadcasting of Channel 5 and S4C Digital. Those services are currently carried on Multiplex A, but, under the reorganisation of services which the Multiplex Order effects, they will be displaced onto Multiplex 2. It is considered that, but for the Gaelic Order, there would be unacceptable uncertainty as to whether the Multiplex 2 licence holder would, under the provisions of the 1996 Order, inherit the Gaelic obligation, or whether (as is intended) that obligation would remain with the Multiplex A licence holder.

5. Territorial Extent and Application

5.1 The Multiplex Order extends and applies to the United Kingdom, including the Isle of Man (pursuant to Article 6(1) of the Communications (Isle of Man) Order 2003 SI 2003/3198); Guernsey (pursuant to Article 6 and Schedule 2 of the Communications (Bailiwick of Guernsey) Order 2003 SI 2003/3195) and Jersey (pursuant to Article 6 and Schedule 2 of the Communications (Jersey) Order 2003 SI 2003/3197).

5.2 The Gaelic Order extends and applies to the United Kingdom only.

6. European Convention on Human Rights

As both instruments are subject to negative resolution procedure and do not amend primary legislation, no statement is required.

7. Policy background

- 7.1 The Government is committed to ensuring that spectrum is used as efficiently as possible in order to deliver the maximum benefit for UK citizens and consumers. In light of this commitment, and the recent development of new technologies in relation to digital broadcasting (MPEG4¹ and DVB-T2²), the Secretary of State for Culture, Media & Sport wrote to Ofcom in November 2007 requesting advice as to how the spectrum used for Digital Terrestrial Television (DTT) might be utilised more effectively in order to provide new services.
- 7.2 Ofcom issued a consultation – ‘Digital Terrestrial Television: Enabling new services for viewers’ – on 21 November 2007, outlining the regulators’ proposals for achieving the provision of new services. This consultation closed on 31 January 2008, and a statement was issued on 3 April 2008 outlining Ofcom’s response to the Secretary of State’s request.
- 7.3 On 18 April 2008 the DCMS published a draft of the Multiplex Order on the departmental website and invited comment from interested parties on the legal processes proposed to be used to achieve the multiplex reorganisation. Responses were received from nine broadcasters. While many of the responses were concerned with Ofcom policy and process, there were some important issues raised in respect of the Order itself. These included concerns about the number of Channel 3 licenses required to support a bid for capacity, the arrangements for the carriage of displaced services, determination of carriage costs, the need for assurances about the ability to recoup development costs arising from the introduction of new technology, provision for subletting digital capacity, the competition process for allocating slots on Multiplex B for high definition TV services and provision for Gaelic programming.
- 7.4 In most cases we have been able to respond to these concerns by either making changes to the Order (and in the case of Gaelic provision, drawing up a separate Order), or by Ofcom agreeing to provide further clarification in their Statutory Notice of Invitation to Apply for DTT Multiplex B capacity. Some of the proposed arrangements will need to be subject to negotiation between broadcasters however, and we have made this clear to the interested parties. Six of the nine responses to the consultation were confidential, but the other 3 responses will be published on the DCMS website.
- 7.5 In short, Ofcom proposes to clear digital television Multiplex B (owned by BBC Free-to-View Ltd) of its existing services, and allow the multiplex licensee to upgrade it using the MPEG4 and DVB-T2 technologies. The regulator will then award two out of the three tranches of capacity sufficient to carry a high definition television service which it is anticipated that this newly upgraded capacity will provide, by means of a competition among the public service broadcasters. At a later date, technological improvements are likely to mean that the capacity needed for such services will be less, so there should be space for at least four such services, and a third tranche out of the four can then be awarded via a similar competition.

¹ MPEG4 is an enhanced, more efficient version of the current MPEG2 digital video compression standard.

² DVB-T2 is a new transmission standard expected to deliver an increase of at least 30% over the current DVB-T standard, while maintaining the same coverage.

7.6 The services displaced from Multiplex B will need to be accommodated on Multiplexes 1 and 2. Channel Five and S4C will also need to move to Multiplex 2 as part of the Government's commitment to ensuring that they are universally available after digital switchover. An effect of this is the need to make clear which Multiplex licence holder retains the obligation to carry Gaelic programmes. For the reasons given at paragraph 4.2 above, that necessitates an amending Order under section 32 of the 1996 Act.

7.7 This statutory instrument provides Ofcom with the relevant powers to achieve this re-organisation of DTT spectrum – to hold a competition for Multiplex B capacity, to vary the Multiplex B licence, to license the new services to be provided on Multiplex B, and to vary the Multiplex 2 and Multiplex A licences to allow for the carriage of displaced services.

8. Impact

An Impact Assessment in respect of business is attached to this memorandum.

9. Contact

Moira Goatley at the Department for Culture, Media and Sport Tel: 020 7211 6927 or e-mail: moira.goatley@culture.gsi.gov.uk can answer any queries regarding the instrument.

Summary: Intervention & Options

Department /Agency: Department for Culture, Media and Sport	Title: Impact Assessment of Television Multiplex Services (Reservation of Digital Capacity)	
Stage: Final	Version:	Date: 15 April 2008
Related Publications: Digital Television: Enabling new services - Ofcom statement, 3 April 2008. The Future of Digital Terrestrial Television - Ofcom consultation, 21 November 2007.		

Available to view or download at:

<http://www.ofcom.org.uk/consult/condocs/dttfuture/dttfuture.pdf>

Contact for enquiries: Moira Goatley

Telephone: 020 7211 6927

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

Ofcom, the independent Telecommunications industry regulator, has recommended a reorganisation of the Digital Terrestrial Television (DTT) platform in order to embrace certain developments in digital technology. The change would increase capacity on the platform and enable more varied services, potentially including high definition (HD) services, to be provided.

The Secretary of State will need to make an Order under section 243 of the Communications Act 2003 giving Ofcom the regulatory powers necessary to enact the reorganisation.

What are the policy objectives and the intended effects?

The intention is to reorganise the existing DTT platform by clearing one of the three Public Service Broadcasters' (PSB) Multiplexes and upgrading it to use two new technologies (MPEG4 and DVB-T2), which will enable richer and more varied services, potentially including HD services, from around 2009. Ofcom intervention is needed to ensure that the reorganisation of the platform can be co-ordinated and implemented within the timeframe of Digital Switchover (DSO).

The proposed section 243 Order would empower Ofcom to give effect to the proposed changes.

What policy options have been considered? Please justify any preferred option.

A number of issues and options were assessed. The introduction of the two new technologies to the DTT platform was thought to be in the interests of consumers, but the question was whether intervention was required to achieve this upgrade. Without direct intervention, it would not be possible to maximise benefits (or minimise costs, e.g. around DSO) to viewers.

Intervention will generate significant benefits for consumers while ensuring that viewers continue to have access to the existing PSB services and that spectrum efficiency is maintained.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

The policy will be reviewed in early 2014. The cost of intervention on key stakeholders has been estimated as £3bn-£5bn (source: The Future of Digital Terrestrial Television: Ofcom).

Ministerial Sign-off For SELECT STAGE Impact Assessments:

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 Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option:	Description:
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COSTS	ANNUAL COSTS	Description and scale of key monetised costs by 'main affected groups'				
	<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">One-off (Transition)</td> <td style="width: 30%;">Yrs</td> </tr> <tr> <td style="background-color: #ffffcc;">£ N/A</td> <td></td> </tr> </table>		One-off (Transition)	Yrs	£ N/A	
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Average Annual Cost (excluding one-off)						
£ N/A						
Total Cost (PV)		£				
Other key non-monetised costs by 'main affected groups'						

BENEFITS	ANNUAL BENEFITS	Description and scale of key monetised benefits by 'main affected groups'				
	<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">One-off</td> <td style="width: 30%;">Yrs</td> </tr> <tr> <td style="background-color: #ffffcc;">£ N/A</td> <td></td> </tr> </table>		One-off	Yrs	£ N/A	
	One-off		Yrs			
	£ N/A					
<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">Average Annual Benefit (excluding one-off)</td> <td></td> </tr> <tr> <td style="background-color: #ffffcc;">£ N/A</td> <td></td> </tr> </table>	Average Annual Benefit (excluding one-off)		£ N/A			
Average Annual Benefit (excluding one-off)						
£ N/A						
Total Benefit (PV)		£				
Other key non-monetised benefits by 'main affected groups'						

Key Assumptions/Sensitivities/Risks An assumption was made that the PSBs would want to compete for slots on an upgraded multiplex. One of the benefits of the proposed change would be to make the DTT platform more capable of responding to competition by providing higher bandwidth services.

Price Base Year 2009	Time Period Years 25	Net Benefit Range (NPV) £ 3-5bn	NET BENEFIT (NPV Best estimate) £ 3-5bn
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What is the geographic coverage of the policy/option?	British Islands
On what date will the policy be implemented?	Autumn 2008
Which organisation(s) will enforce the policy?	Ofcom
What is the total annual cost of enforcement for these organisations?	£ Marginal
Does enforcement comply with Hampton principles?	Yes
Will implementation go beyond minimum EU requirements?	N/A
What is the value of the proposed offsetting measure per year?	£ N/A
What is the value of changes in greenhouse gas emissions?	£ N/A
Will the proposal have a significant impact on competition?	No

Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	Yes	Yes	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of £ N/A	Decrease £ -	Net Impact £ -	

Key:

Annual costs and benefits: Constant Prices

(Net) Present Value

Evidence Base (for summary sheets)

INTRODUCTION

1. Digital technologies are bringing choice and variety to viewers in a way that could not have been envisaged a few years ago. New types of content are being developed across a variety of digital platforms. DTT is a central facet of the new television landscape and DSO will mean that DTT services are available throughout the UK. This will ensure that the entire country (98.5% of the population) has access to Public Service Broadcasting (PSB), free-to-air. It is important that DTT remains at the forefront of broadcasting and adopts new technologies so that it can offer new services and make best use of spectrum, which is a scarce and valuable resource.
2. New technologies are becoming available, and there is now the possibility of upgrading the DTT platform to generate greater efficiency in the use of broadcasting spectrum, and potentially to double platform capacity over time. The aim is to upgrade the DTT platform within the timeframe of DSO, thus introducing changes in a streamlined way, thus minimising the number of times consumers would have to upgrade their DTT equipment in order to receive new services. Nevertheless, without direct intervention there is a real danger that market failures could prevent the necessary technical upgrade taking place in the required timeframe. Potential market failures include difficulty in co-ordinating an upgrade because of the complex commercial and regulatory situation, conflicting incentives and the failure of parties to internalise benefits accruing to others (particularly consumers, who would be the largest beneficiaries), the inability to move quickly to take advantage of the unique opportunity provided by DSO and the failure to take full account of public interest in the use of the multiplex capacity. There are essentially four possible options for dealing with this situation:
 - a. No intervention;
 - b. No direct intervention, with the PSBs determining the allocation of capacity on the PSB multiplex (Multiplex B);
 - c. Revoking the licence for Multiplex B, which is currently allocated to the BBC, and re-awarding the licence;
 - d. Ofcom running a comparative selection process between all PSBs for the allocation of Multiplex B capacity.

These four options are assessed below.

OPTIONS FOR INTERVENTION

Option 1: No direct intervention

3. The main benefit of no intervention is the avoidance of regulatory failure, but there would be substantially more costs involved.

Table 1

Benefits

Reduces risk of regulatory failure owing to inappropriate intervention (e.g. requiring the upgrade to proceed too early).

Costs

- Spectrum efficiency: the incentives the BBC has to make multiplex capacity available to others are likely to be less than those which would be experienced by a profit-making entity. Thus capacity could be left unused which has social cost implications due to the valuable nature of the capacity.
- Any limits on the choice and range of services offered on the multiplex may impact on the uptake of Set-Top Boxes (STBs), which impacts on the speed at which the benefits of the upgrade are realised. This has the potential to lead to a sub-optimal outcome, both for the range and diversity of services on the multiplex, and in terms of spectrum efficiency, which goes beyond the limits imposed in legislation.
- The functions and role of the BBC Trust are limited to the BBC, and therefore their focus and remit are significantly narrower than those of Ofcom in relation to this issue.
- There is no way of guaranteeing access to capacity for new services for other broadcasters.

4. As a result, the costs and risks associated with leaving the allocation of capacity with one broadcaster may not result in the optimal outcome for citizens and consumers, nor the most efficient use of spectrum.

Option 2: No direct intervention – PSB proposal

5. The benefits of this option essentially replicate those of option 1 above, but there is a higher risk of delay to the changes being sought.

Table 2

Benefits

- Reduces risk of regulatory failure owing to inappropriate intervention (e.g. requiring the upgrade to proceed too early).
- Reduced administrative burden on Ofcom and the PSBs.

Costs

- Spectrum efficiency: an agreement reached between the PSBs suggests that the difficulties posed by the BBC having overall power to allocate capacity on the multiplex could be overcome.
- The lack of a defined timetable for the upgrade provides less certainty to manufacturers and consumers.
- Risk of delay: the market failures which can impact upon the ability of the DTT platform to upgrade swiftly to new technologies would still be expected to impact upon the finalisation of the agreement between the PSBs and on the timetable over which the upgrade was delivered. These include the risks posed by the existence of diverging incentives across the different PSBs. Therefore, there is a risk that the allocation of capacity by agreement of the PSBs could introduce delays, which even if relatively minor, could pose significant costs on consumers if they impact upon the availability of new services for DSO in some regions.
- A sub-optimal allocation of capacity (and/or quality, range and diversity of services provided using that capacity): the PSBs and the BBC Trust all have defined remits and obligations in relation to the delivery of PSB. However, none of these entities has obligations to protect the interests of consumers or citizens through their access to the DTT platform. Therefore, since consumer externalities exist and significant benefits to consumers could arise from the upgrade process and the allocation of capacity, Ofcom would appear to be the only entity with a remit sufficiently broad to ensure that these benefits were captured.
- Incursion on Ofcom's statutory remit: in addition to the above concerns about the ability of other entities to make decisions which fully reflect the benefits to consumers of the upgrade, there is

concern that any attempt to do so would represent an unworkable conflict between Ofcom's statutory role and the role of the other entities involved (such as the BBC Trust).

6. Because of the risk of delay, this option is unlikely to result in the optimal outcome for citizens and consumers, nor the efficient use of spectrum.

Option 3: Revoke and re-award the BBC licence of Multiplex B

7. This option appears to be disproportionate compared to other potential options. It would require that the BBC had breached the terms of its licence, which is not the case, and in the absence of this, a revocation could be made on the grounds of spectrum efficiency. However, there are other options available which could be as effective at promoting spectrum efficiency, but which are less interventionist and therefore more proportionate than revocation.

Option 4: Ofcom run comparative selection process between the PSBs

8. The impact this option would have on stakeholders was explored in considerable detail during the consultation process and Ofcom's original proposals were substantially revised.

Table 3

Benefits

- More proportionate response than licence revocation as the multiplex licence can be left with the BBC.
- Likely to give more certainty sooner to STB manufacturers and consumers, thus aiding the uptake process.
- Potentially greater variety in providers of new content which benefits consumers and increases STB uptake.
- Avoids market failure risk preventing efficient capacity allocation.
- Independent approach which avoids the issue of favouring own services in the allocation of capacity.
- Participants would have a mechanism through which they could refer disputes to Ofcom (the reorganisation process may result in loss for certain broadcasters due to the change in coverage when moving between certain multiplexes and the carriage contract negotiations that are necessary for displaced services). This service would not be available if there was no intervention.

Costs

- Risk of regulatory failure as there is less market involvement with this option than with others.
- Administrative costs associated with intervention by Ofcom and regulatory burden on licensees associated with applying for capacity and adhering to commitments made in return for access to capacity.

9. We believe that the market failure risk outlined above in relation to the reorganisation, upgrade and allocation of capacity on Multiplex B provides sufficient justification for intervention in the DTT platform upgrade, and in the allocation of the multiplex capacity. In moving forward it has been agreed that one of the blocks of capacity on Multiplex B should be retained by and allocated to the BBC. The main benefits of this are to avoid unnecessary regulatory overlap between Ofcom and the BBC Trust and to avoid imposing undue uncertainty on the BBC, which undertook a Public Value Test for its HD service last year. This also ensures that the BBC is not subjected to double jeopardy by being left without access to capacity on the upgraded multiplex and unable to introduce the new HD service. We do not believe that a reduction in the number of blocks available in the comparative selection process would unreasonably reduce the level of competition in the process. We believe that, taken as a whole, this proposed approach constitutes the most appropriate means of

maximising the benefits of the technology upgrade, and is more likely to result in an optimal outcome.

ALLOCATING CAPACITY

10. Three options for the allocation of capacity on Multiplex B were considered:

- Direct allocation following consultation;
- A comparative selection process where proposals are assessed against pre-defined criteria, and run by Ofcom;
- Allocation decision as an output of the PSB review.

The benefits and costs of each of these options are summarised in table 4 below:

Table 4: Options for allocation of Multiplex B capacity

Options	Benefits	Costs	Assessment of Magnitude
1. Direct Allocation by Ofcom now	<ul style="list-style-type: none"> • Faster process – earlier certainty in capacity access for equipment manufacturers, broadcasters and consumers • Consistent with consumer reception equipment being on sale well in advance of events likely to drive uptake 	<ul style="list-style-type: none"> • Not a fair, open or transparent process • Less structured capacity allocation – greater reliance on regulatory judgement (risk of regulatory failure) 	<ul style="list-style-type: none"> • Benefits are certain but the costs are significant and highly likely to outweigh any benefits
2. Comparative Selection Process by Ofcom	<ul style="list-style-type: none"> • More open and transparent than direct allocation • Structured process to create competition among potential holders – creates information to inform allocation • Greater competition for capacity as PSBs could submit applications for more than one of the initial blocks • Greater ability to convert broadcaster commitments from allocation process into obligations 	<ul style="list-style-type: none"> • More complex process than option 1 • Slower process than direct allocation (though some information / certainty provided by definition of criteria) 	<ul style="list-style-type: none"> • Benefits are certain and costs are relatively low compared to other options and can be addressed in design, therefore the outcome is likely to be positive
3. Decision as Output of PSB Review	<ul style="list-style-type: none"> • Decision is made with greater information than option 1 • Allows allocation to take place in wider context of the other decisions being 	<ul style="list-style-type: none"> • More significant delay – might take over a year to achieve, with implications for DSO • Unclear whether it would be possible to create any element of competition for 	<ul style="list-style-type: none"> • Benefits can be better achieved with a comparative selection process and the costs are significantly higher under the PSB Review

	<p>taken in the review</p> <ul style="list-style-type: none"> • More open and transparent than direct allocation (though less so than comparative selection process) 	<p>capacity</p> <ul style="list-style-type: none"> • Still less information than option 2 as there is no specific request for information on the potential use of this capacity from the market as part of the PSB review 	
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11. Based on the impact each of these options would have on the various stakeholders, a comparative selection process would enable Ofcom to achieve its policy objectives, and appears to be the best option available for doing so. It reduces the risk of regulatory failure due to the interaction the market will have throughout the process, and has the potential to include a competitive element between broadcasters (with the exception of the BBC as explained above). It also fosters some early level of certainty as to the outcome, as the early announcement of selection criteria enables consumers and equipment manufacturers to make their own decisions regarding potential outcomes whilst still retaining a comparatively shorter time scale before a confirmed decision.

12. This means the benefits of the reorganisation are likely to accrue to stakeholders earlier, as the scale and timing of the benefits partly depend on certainty among equipment manufacturers and consumers to generate faster uptake of the STBs. A comparative selection process is also a more equitable approach as it sets a list of common criteria which all parties are judged against and all have the opportunity to provide any relevant information to Ofcom for the process.

CONCLUSION

13. Following each of the preferred allocation options, the overall outcome will be an upgrade of one DTT Multiplex (Multiplex B) with sufficient capacity for three high definition services awarded ultimately by Ofcom through comparative selection process. It is important to consider the impact this overall outcome will have on key stakeholders as well as the impact of the counterfactual – a state of the world without intervention where there is slow adoption of MPEG-4 and DVB-T2 technologies. Ofcom considered a number of hypotheses and produced estimates of financial impacts on consumers and broadcasters. This produced an indication of the potential scale of benefits rather than a precise qualification of the benefits of the proposals. Ofcom’s initial consultation document set out the results of this work which is summarised in Table 5 below. The results were questioned by some respondents as they felt they did not have sufficient information to comment on the results. Nevertheless, there was a general acceptance from consultation respondents that the upgrade would generate significant benefits and was worth pursuing.

Table 5: Estimated financial impact of intervention on key stakeholders, expressed in NPV over 25 years (2008-2032)

	Incremental benefits of preferred intervention path over the counterfactual
Additional consumer surplus from preferred intervention path	£3bn to £5bn
Additional producer benefit on the DTT platform	£225m - £725m

14. A summary of the impacts envisaged from the delayed adoption of the technology upgrade and the preferred intervention path is set out at Table 6 below:

Table 6: counterfactual v the preferred intervention path

– Delayed Adoption of Technology Upgrades	Preferred Intervention Path
<p>Benefits</p> <ul style="list-style-type: none"> · At least one universal HD service which generates some benefits for consumers · Speedier adoption of MPEG-4 and DVB-T may provide some immediate benefits for consumers · Potentially greater flexibility for broadcasters. Can adapt to changing circumstances · No reorganisation costs · No risk of new regulatory failure <p>Related to DSO</p> <ul style="list-style-type: none"> · Maintains the status quo for the programme · Would forego the costs associated with intervention. 	<p>Benefits</p> <ul style="list-style-type: none"> · Significant benefits to consumers as a result of the speedy upgrade to both MPEG-4 and DVB-T2 which maximises the availability of new services (potentially four HD services) and which will spur take-up of new STB (which is key to allowing the platform to upgrade) · Greater spectrum efficiency by unlocking additional capacity on the platform · Potential for a greater quantity and variety of (universal) content · Strengthen the future competitive position of the DTT platform through improved quality and mix of content and services whilst maintaining universal coverage, making it more attractive to consumers · Compared to a counterfactual in which the platform does not upgrade sufficiently quickly, and as a result loses share to alternative platforms, a higher viewer share for individual broadcasters which in turn increases revenues (relative to the counterfactual of a declining share of viewers on DTT) · Design of entire upgrade process aims to increase the uptake speed of STBs and iDTVs which should encourage economies of scale in their production so the price becomes comparable with DVB-T equipment sooner, increasing viewer numbers and thus realising greater benefits <p>Related to DSO</p> <ul style="list-style-type: none"> · More choice of services early on in DSO programme strengthens the overall benefits viewers can receive · Opportunity to communicate the changes at the same time as switchover messaging – also the Help Scheme could inform vulnerable groups · Many consumers will be able to avoid a double upgrade later on by buying DVB-T2 & MPEG-4 compatible equipment at switchover
<p>Costs</p> <ul style="list-style-type: none"> · Even if an upgrade of the entire platform occurs eventually, it carries the risk of being incomplete and substantially slower resulting in lower overall 	<p>Costs</p> <ul style="list-style-type: none"> · More channels may reduce viewer shares for some channels, potentially impacting advertising revenues for certain players (though note that the

<p>consumer benefits. Additionally, if it fails to coincide with DSO, the benefits of early adoption of the new technology resulting in faster take-up of equipment and lower disruption for consumers may be lost</p> <ul style="list-style-type: none"> · Without the benefits of a DSO-timed upgrade, the ability of the DTT platform to compete with other platforms in the future may be restricted, both in terms of viewer numbers (which affects advertising revenues of commercial broadcasters) and for quality content · Lower quantity and variety of new services <p>Related to DSO</p> <ul style="list-style-type: none"> · Would forego the benefits of the Intervention 	<p>overall viewing on the platform as a whole is expected to be improved by this intervention)</p> <ul style="list-style-type: none"> · The costs of the upgrade process including reorganisation costs and those incurred due to the allocation process (however, these are short term and one-off) · Some potential changes to the coverage of existing services on the platform · Risk of regulatory failure throughout the process (however, this can be addressed in the design of the allocation process) <p>Related to DSO</p> <ul style="list-style-type: none"> · Need to inform those who have already switched over of purchasing options as soon as possible · Information on the technical upgrade option would need to be included in the Help scheme · Coverage of PSB multiplexes may be slightly reduced after DSO in some locations.
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ASSESSMENT OF RISKS

15. The DSO-related costs and benefits included above are for the year 2009. Implementing the policy after DSO has been completed would bring the benefit that there is a clear message to deliver to consumers and thus reduce the risk of confusion. However, there would be no infrastructure in place to deliver the new information consumers need and there would be significant costs in generating such a structure. Additionally, by delaying until after switchover it is likely that there would be a much higher number of STBs and integrated digital TVs (iDTVs) that need upgrading, imposing additional costs on consumers who choose to convert to DVB-T2, and potentially creating an environmental impact via the large number of boxes that may be discarded earlier than expected in their lifecycle.
16. There is a risk with the intervention that the other multiplexes do not follow the upgrade path and therefore the efficiency gains in the use of the spectrum are not as high as they could potentially be. This risk is partially related to the uptake of new equipment as the greater this is, the higher the potential viewer numbers for any service delivered by the new technology, and therefore the greater the benefit of upgrading and improving spectrum efficiency. In turn, the penetration of new STBs and iDTVs is dependent on content and the type of services delivered by the new technologies as it is this that will provide the incentives for consumers to buy new receivers.
17. The significance of this risk partly depends upon the impact it will have on key stakeholders. Overall, spectrum efficiency will still have increased, even if not to its full potential. The upgrade of a single multiplex may still generate net benefits for consumers as they will still have access to new services provided on the multiplex if they choose to upgrade their equipment, and the costs are relatively low for them. Whether the individual broadcasters would benefit if this event occurred depends upon the additional revenue they can generate from the new technology on the single multiplex (which depends upon the uptake of equipment), and how this compares to the one-off costs. However, the outcome is more likely to be net beneficial for broadcasters if the multiplexes share the one-off costs between them, given that in the longer term there are potential benefits for all of them.
18. This risk can be reduced through the comparative selection process; included in the selection criteria is the need for the applicant to demonstrate how they will promote the rapid and widespread adoption of DVB-T2 MPEG-4 consumer reception equipment. There are also content-related criteria that applicants will be assessed under, in that they must contribute to the range and diversity of television services available on DTT, which should ensure there are services provided that are

attractive to consumers. By including such obligations in the licence terms, the viewer numbers of the new technology services should increase at a faster pace, thus providing the incentives for other multiplex operators to upgrade to the more efficient technologies sooner, increasing the overall benefits of the process even further. Therefore, whilst this risk could result in a negative outcome for broadcasters, it is a relatively low risk, especially considering the criteria included in the comparative selection process to promote equipment uptake and those related to content. As such, the risks that other multiplexes do not follow the upgrade path and that equipment uptake is slower than expected are less significant.

19. There are further risks that relate to the DSO process, which are shown in table 7 below along with methods to potentially mitigate them.

Table 7 Risks v Risk mitigation

<p>Risks</p>	<ul style="list-style-type: none"> · Help Scheme comes under pressure to change its policy on Help Scheme equipment to include DVB-T2 technology with potential associated cost increases · Increased confusion for consumers when communicating the new choices · Potentially de-stabilises confidence in DSO and DTT platform which causes reduction in audience share – people defer decisions to upgrade to digital · Volume production of DVB-T2 equipment is late and benefits of early launch cannot be realised. Could be due to delays in standards, manufacturing delays or lack of scale in UK market alone to justify volume production · First generation DVB-T2 equipment does not function to full expectations, destabilising consumers’ purchasing decisions and the DSO programme more widely · Engineers unable to implement the DSO timetable if some re-tasked to DTT capacity work
<p>Risk Mitigation</p>	<ul style="list-style-type: none"> · Communicate with consumers – explain that no existing services currently received by consumers will be lost, but that they have the option to obtain additional services through the purchase of new equipment. Also that it is not a mandatory change for consumers – existing equipment will still provide existing TV services. This is addressed in the allocation criteria for HD slots as applicants have to demonstrate how they will reduce consumer confusion surrounding this. · Early and prompt decision to provide certainty to manufacturers, which decisions in this statement and the early completion of the comparative selection process should assist with · Form a working group, which amongst other things will pilot test transmission to validate the new services and to test how consumers behave and the information they will need · Continue efforts in international fora to promote

20. The majority of the risks identified above would be irrelevant under the counterfactual (i.e. if there were no intervention), and to some degree under an implementation of the policy immediately after DSO has been completed. Under the counterfactual, the status quo of the DSO programme would be maintained, and therefore the net effect is likely to be neutral. However, there are benefits that can accrue to the DSO process as a result of intervention as noted above, and therefore the net effect of intervention compared to the counterfactual depends upon the ability of the risk mitigation options to limit the identified risks and their impact upon the net benefits of the process. Therefore, with the right actions in place, this intervention may well have a net positive effect on the DSO process.

21. Multiplexes 1 and 2 are expected to remain with the current DVB-T/MPEG-2 technologies for the foreseeable future to continue the universal coverage of PSB services for all UK citizens. This is beneficial for consumers as it means that access to the new services is a choice to opt into, and if they choose not to upgrade their receiving equipment they will not lose any services they are currently able to receive. This follows Ofcom's key objectives in terms of promoting PSB purposes.

THE PREFERRED OPTION

22. The preferred option is to intervene in the technological upgrade of the DTT platform as, despite the improvements in spectrum efficiency and potential benefits to broadcasters, it is unlikely that it will happen in the optimal timeframe without intervention due to incentive-based market failure issues. This appears to be the case even if the PSBs co-operate formally to bring about the upgrade. The intervention will involve the clearing of Multiplex B which will then be upgraded, and the award of this capacity will be made by allocating one strand to the BBC and the other strands through a comparative selection process.

23. This is more interventionist than the other options considered in the consultation and so carries with it a degree of regulatory failure risk and an opportunity cost in terms of lower viewership of Multiplex B while DVB-T2/MPEG-4 STB and iDTV penetration is growing. However, the existence of market failure risks without intervention significantly outweighs these, particularly as the design of the comparative selection process can be used to minimise regulatory failure where possible.

24. The benefits of the upgrade are potentially significant for all stakeholders compared to the net outcome without an upgrade or with a delayed upgrade and, as such, they are most likely to far exceed the comparative costs and risks involved. The proposals therefore provide the best opportunity to upgrade the platform and achieve Ofcom's policy objectives in a way that generates the highest possible level of net benefits to key stakeholders.

25. In order to put these changes in place, the Secretary of State is required to make an Order under section 243 of the Communications Act 2003 empowering Ofcom to:

- Vary the reservation of capacity for ITV and Channel 4 contained within Multiplex 2 to require carriage of Channel Five and S4C, and to make room for TG4, GDS and BBC services displaced from Multiplex B.
- Make a consequential change to Five's allocation on Multiplex A.
- Make provision for a PSB competition for digital capacity on Multiplex B and vary the licence so as to reserve capacity on the multiplex for new services.
- Grant "public service digital programme licences", if necessary, for these new services.

26. Section 243 defines public service broadcasters as Channel 3 (ITV), Channel Four, Channel Five, the Welsh Authority (S4C) and the public teletext provider.

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	No	No
Small Firms Impact Test	No	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	No	No
Other Environment	No	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No