

Title: Transposition of Directive 2013/37/EU, regarding the Re-use of Public Sector Information Lead department or agency: The National Archives Other departments or agencies:	Impact Assessment (IA)
	Date: 09/05/2014
	Stage: Consultation
	Source of intervention: European Commission
	Type of measure: Directive
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Summary: Intervention and Options	RPC Opinion:

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One- Measure qualifies as In, One-Out?	
0	0	0	In scope	Zero Net Cost

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

The European Council and European Parliament adopted Directive [2013/37/EU](#) amending Directive [2003/98/EC](#) on the re-use of public sector information on 26 June 2013. Member States were given until 18 July 2015 to transpose the Directive. The UK needs to ensure the amendments to the Directive are reflected adequately in UK law and policy. The recitals to the amending Directive acknowledge that Public Sector Information is a valuable resource in the knowledge economy. It is stated that the rules laid down in the 2003 Directive have not kept pace with rapid technological change; and that some Member States have pursued open data policies more vigorously than others, resulting in a scope for 'minimum harmonisation'.

What are the policy objectives and the intended effects?

The action is intended to contribute to economic growth and job creation by unlocking the economic potential of already legally-available public sector information through improved conditions for exploitation by businesses and civil society actors. The action is also intended to have a positive effect on the transparency, efficiency and accountability of governments and to contribute to citizen empowerment.

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

The following options packages have been assessed against the base case ("do nothing"). All Options involve copying out amendments to Articles 1,2,3,4,5,6,7,8,9,11 as far as is possible. Amendments to Article 6 (on charging) and Article 4 (on the redress mechanism) are known to require implementation options beyond copy out. **Option 1:** Non-copy out of article 6(3) (Criteria set out in Regulations) and article 4 (Retention of existing investigative body with a separate review mechanism, a judicial tribunal.) **Option 2:** Non-copy out of article 6(3) (Criteria set out in administratively set guidance) and article 4 (Retention of existing investigative body with a separate review mechanism, a judicial tribunal)

Will the policy be reviewed? Yes, post-consultation. If applicable, set review date: July 2014					
Does implementation go beyond minimum EU requirements?			Appraisal stage		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro	< 20	Small	Medium	Large
What is the CO ₂ equivalent change in greenhouse gas emissions?			N/A		

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 _____

Summary: Analysis & Evidence

Policy Option 1

Description: Option 1: Non-copy out of article 6 (Criteria set out in Regulations) and article 4 (Retention of existing investigative body with a separate review mechanism, a judicial tribunal.)

FULL ECONOMIC ASSESSMENT

			Net Benefit (£m per annum)		
			Low: 0	High: 0	Best Estimate: 0

COSTS (£m)	Total	Transition	Average	Annual	Total	Cost
	(Constant Price)	Years	(excl.	Transition)	(Present Value)	
Low	Optional		Optional		Optional	
High	Optional		Optional		Optional	
Best Estimate	0		0		0	

Description and scale of key monetised costs by ‘main affected groups’

Quantifiable costs considered include: administrative costs from permitting re-use; loss of revenues to government due to changes in charging policy; and the costs associated with complaint investigation by the Office of Public Sector Information and with review by the First-tier Tribunal. While there are small costs involved, when rounded to the nearest £1 million they are rounded to £0 and would need to be many times larger to not be rounded to £0.

Other key non-monetised costs by ‘main affected groups’

There could be reductions in the quantity and quality of future public sector information due to removal of incentives to develop information services. Reductions could also occur due to disruption and/or reduction of funding for public sector information generating bodies, although this is very unlikely.

BENEFITS (£m)	Total	Transition	Average	Annual	Total	Benefit
	(Constant Price)	Years	(excl.	Transition)	(Present Value)	
Low	Optional		Optional		Optional	
High	Optional		Optional		Optional	
Best Estimate	0		0		0	

Description and scale of key monetised benefits by ‘main affected groups’

There are no monetised benefits.

Other key non-monetised benefits by ‘main affected groups’

Key non-monetised benefits include those accruing to increased transparency and accountability in the conduct of government. There are also benefits associated with more effective use of public services by citizens due to increased availability of information. A further non-monetised benefit may stem from the increased availability of material for research and development, which may assist entrepreneurship.

Key assumptions/sensitivities/risks	Discount rate	3.5
<p>Evidence on benefits for the monetisation model for pricing changes is sensitive to assumptions (including in its applicability to a UK context) and model specifications. The main sensitivity for the analysis of charging provisions is interpretation of the scope of exceptions to the marginal cost pricing policy. The available evidence on benefits may not fully capture the wider economic impact of public sector information – for instance the benefits in terms of consumer surplus (discussed in Annex D).</p> <p>Additionally, we assume there will be no change in the volume of complaints and that a tribunal will require 7.7 days of panel sitting time. This assumes that a Tribunal would require the same amount of time to decide the case as occurred under the existing system (it may be the case that a Tribunal takes less time). Due to the low costs and volumes, it is unlikely that any reasonable changes to these assumptions would change the estimated costs substantially.</p>		

Summary: Analysis & Evidence

Policy Option 2

Description: Option 2: Non-copy out of article 6(3) (Criteria set out in administratively set guidance) and article 4 (Retention of existing investigative body with a separate review mechanism, a judicial tribunal)

FULL ECONOMIC ASSESSMENT

			Net Benefit (£m per annum)		
			Low: 0	High: 0	Best Estimate: 0

COSTS (£m)	Total	Transition	Average	Annual	Total	Cost
	(Constant Price)	Years	(excl.	Transition)	(Present Value)	
Low	Optional		Optional		Optional	
High	Optional		Optional		Optional	
Best Estimate	0		0		0	

Description and scale of key monetised costs by ‘main affected groups’

Same as Option 1.

Other key non-monetised costs by ‘main affected groups’

Same as Option 1.

BENEFITS (£m)	Total	Transition	Average	Annual	Total	Benefit
	(Constant Price)	Years	(excl.	Transition)	(Present Value)	
Low	Optional		Optional		Optional	
High	Optional		Optional		Optional	
Best Estimate	0		0		0	

Description and scale of key monetised benefits by ‘main affected groups’

Same as Option 1.

Other key non-monetised benefits by ‘main affected groups’

Same as Option 1.

Key assumptions/sensitivities/risks

Same as Option 1.

Discount rate

3.5

Transposition of Directive 2013/37/EU

On the Re-use of Public Sector Information

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1. POLICY PROPOSAL

- 1.1. This Impact Assessment (IA) concerns the transposition of Directive 2013/37/EU (the 'amending Directive') into UK law which amends Directive 2003/98/EC on the Re-use of Public Sector Information (the 'PSI Directive'). The PSI Directive was implemented in the UK through the Re-use of Public Sector Information Regulations 2005 (the 'PSI Regulations'¹).
- 1.2. The PSI Directive is concerned with the re-use by businesses and citizens of information held by public sector bodies. 'Re-use' essentially means the use of existing information in new products and services. Its aim is to support technology driven growth and civil society applications, for example, in the use of mapping information in satellite navigation products.
- 1.3. The PSI Directive affects how information can be re-used once it has been legitimately accessed, by placing obligations on the public sector to the benefit of re-users. The PSI Directive does not create rights of access to information
- 1.4. The PSI Directive does not override or modify data protection rules. Re-use of public sector information in the UK must therefore comply with the Data Protection Act and any related regulations.
- 1.5. The amending Directive amends the PSI Directive in several respects:
 - The general principle was changed to ensure accessible documents are re-usable for commercial and non-commercial purposes. (Article 3)
 - The fees chargeable by public sector bodies for re-use of documents are capped at marginal cost, with important exceptions. (Article 6)
 - The means of redress available to a re-user must now include the possibility of review by an impartial body capable of making binding decisions. (Article 4)
 - The scope of the amending Directive is extended to documents held by museums, libraries and archives; with important differences around charging and permissions. (Article 1, 11)
 - There are new transparency requirements for situations in which charges are made. (Article 7)
- 1.6. The amending Directive largely reflects the current UK PSI re-use practice. Implementation of the amending Directive will therefore not require substantial changes to current UK practice.

Options for Transposition

- 1.7. HMG's principle is that copy-out should be used to the greatest extent possible, except where doing so would adversely affect UK interests. Chapter 5 provides economic analysis of those amendments to the PSI Directive entailed by the amending Directive where the intention is to transpose by copy-out² as far as possible.
- 1.8. It is not possible to use copy-out in two areas: Article 6, on charging, which contains elements 'to be defined in Member States'; and Article 4 on the redress mechanisms available to re-users. Implementation options for these Articles and analysis of their effects are provided in Chapter 5.
- 1.9. The UK also intends to deviate from copy-out with respect to the commencement date. Article 2 of the amending Directive requires implementation by 18 July 2015. The UK has made public

¹ [The Re-use of Public Sector Information Regulations 2005 S.I. 2005/1515](#)

² Guidance on transposition of European Amending Directives issued by the Department for Business, Innovation and Skill defines 'copy-out' as occurring, "where the implementing legislation adopts the same wording as that of the Amending Directive or where it cross-refers to the relevant Amending Directive provision."
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/229763/bis-13-775-transposition-guidance-how-to-implement-european-amending-Directives-effectively-revised.pdf

commitments as part of its Open Government Partnership National Action Plan to transpose the amending Directive earlier in April 2015. A key rationale for this commitment is that, as the principle of the amending Directive is beneficial to businesses, delay would not serve UK national interests.

- 1.10. The amending Directive cuts across some of the provisions of the right to data provisions of the Freedom of Information Act 2000, as amended by the Protection of Freedom Act 2012. Following discussion with policy officials and legal advisers it will be necessary to carve out the datasets provisions by means of the implementing regulations. By doing so it will avoid, inconsistent scope (the datasets provisions only apply to England and Wales, for example, whereas the revised UK legislation on PSI will need to be UK wide), the overlapping definitions and terminology which would create uncertainty. While this will involve legal drafting issues it does not represent any additional cost burdens for the public sector or have any economic implications.

Groups affected

- 1.11. Where they exist, any costs resulting from transposition of the amending Directive would fall on the public sector. Any benefits would primarily accrue in the private and voluntary sectors. This is because the amending Directive is concerned with making information held by the public sector easier for other sectors to re-use.
- 1.12. In order to facilitate an accurate yet proportionate analysis of the distribution of monetisable costs the public sector is divided into a number of sectors. These include central government, major information traders in the public sector (many of which are Trading Funds), local government, the health sector and the cultural sector. These provide natural groupings due to differences in volume of activity, ownership of information and the PSI Directive's differing treatment of particular sub-sectors. Detail is provided in **Annex C**.

Documents affected

- 1.13. The PSI Directive applies only to documents supplied as part of an organisation's **public task**. This factor further excludes from the marginal cost charging policy products which do not meet this criterion. For example, the Met Office regards just 1% its trading revenue as relating to activities it is willing to discuss in the context of the PSI Directive (bulk data sales). Its primary public task comprises the Public Weather Service where related data are understood to be made available under open licensing terms. On the other hand, Ordnance Survey does not distinguish between public task and non-public task licensing revenues, with 91% of its revenue being relevant to the provisions of the PSI Directive.

One in, two out

- 1.14. Under the One In, Two Out (OITO, formerly One In, One Out³) policy of regulation, a measure of net cost to business (an In) cannot be implemented unless an equivalent measure of net cost is removed or simplified (an Out).
- 1.15. EU legislative measures that have not been 'gold plated' are exempt from OITO. 'Gold plating' refers here to transposition of EU legislation in a manner which goes beyond minimum requirements and so represents additional regulation for the UK.
- 1.16. UK transposition of amendments to the PSI Directive is being undertaken on the basis of no 'gold plating', except with respect to the transposition date. The transposition project is working towards a commencement date of 6 April 2015. This is in line with government commitment 20 of the UK Open Government Partnership National Action Plan⁴, supporting government policy on Open Data and Transparency.

³ <http://www.bis.gov.uk/assets/biscore/better-regulation/docs/o/11-671-one-in-one-out-methodology.pdf>

⁴ http://data.gov.uk/sites/default/files/library/20131031_ogp_uknationalactionplan.pdf

1.17. The measures contained in the amending Directive may be classified as an in-scope of the OITO policy, due to the issue of transposition date. However, the measure is designed to benefit to businesses, particularly through lowering the default charge for information and providing strengthened redress mechanisms. This principle motivated the government commitment made in the National Action Plan cited above. Since there are no monetised or non-monetised costs to businesses, this does not count as an 'In' under OITO⁵.

Territorial Extent

1.18. It is anticipated that UK implementation of the amending Directive will occur through a single UK-wide statutory instrument. Arrangements will be made for Gibraltar to mirror this instrument.

⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf

2. RATIONALE FOR INTERVENTION

What is public sector information?

- 2.1. Public bodies produce, collect or hold a wide range of information and content. In general it can be described as ‘publicly funded information produced or collected by the public sector’⁶. In the UK, public sector information covers a diverse range of subjects. In the context of the PSI Directive public sector information means information which is produced or collected by the public sector in order to meet a public task. The table below sets out examples of themes and the types of data coming under them, though not their status in the context of the PSI Directive⁷:

Table 2.1 Types of Public Sector Information	
Economic and Business Financial information, company information and economic statistics.	Social Demographic information, attitude surveys, census data.
Geographic Address information, topographic data, and hydrological information.	Meteorological Weather forecasts and climatological data.
Transport Traffic information, road safety statistics, vehicle registration information.	Environmental, agricultural and fisheries Land use information, environmental quality data, farm incomes.
Political Government press releases, proceedings of local and national governments as well as green papers.	Legal Crime and conviction figures, judgements and legislation.
Scientific Information from publicly funded research and medical institutes, patents.	Cultural Materials within museums, art galleries and library resources.

- 2.2. Public sector information is published in a variety of ways, including on official websites, through data portals and in print. In some circumstances it may also be obtained under information access legislation (note the amending Directive does not create new rights of access). Users of the information are varied and include the general public, companies, libraries, charities, and the public sector itself. They use the data in various ways, but the key three uses include: for their own business or personal purposes, to produce products for consumers, or as an input into products for industry⁸.

For example, HM Land Registry is responsible for maintaining records of property transactions in England and Wales. This also enables it to compile information on the prices paid for residential property across those countries. This information is made available by the Land Registry and is re-used by a number of parties in order both to understand the behaviour of the housing market and to provide services to the general public, such as helping them to search for property online.

⁶ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/opendata2012/impact_assessment/impact_assessment_report.pdf

⁷ <http://www.ofc.gov.uk/OFTwork/publications/publication-categories/reports/consumer-protection/ofc861>

⁸ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/opendata2012/impact_assessment/impact_assessment_report.pdf

Current practice

2.3. Re-use involves using PSI for purposes other than the public task for which it was originally produced or collected. Re-use can be undertaken by anybody, including companies, the public sector the third sector and the general public. PSI can be re-used both for commercial and non-commercial purposes. The PSI Directive establishes the range of information which falls within scope. There are several criteria which must be satisfied before re-use can take place:

- The information must be accessible – ie the information has either been published by the public sector body in question or has been made available under access legislation such as FOI;
- Personal information is exempt and compliance with Data Protection legislation applies;
- Information in which the copyright is held by a copyright holder other than the public sector is outside the scope;
- The applicant must obtain the permission of the public sector body before re-using it.

These general principles continue to apply under the amending Directive except that making accessible information available for re-use becomes mandatory for most public sector information.

2.4. Under the current PSI Regulations, there is a process which allows a re-user, or potential re-user, to make a complaint. The first step would be to submit a complaint to the public sector body concerned. If, following investigation, the complainant remains dissatisfied then it may refer the matter to the Office of Public Sector information (OPSI) to investigate. The complainant and/or the public sector body may request that the recommendations of OPSI are reviewed by the Advisory Panel for Public Sector Information (APPSI) under the PSI Regulations.

Characteristics of PSI

2.5. Public sector information, particularly when in digital form, has a number of economic characteristics arising from being an 'information good', in contrast to a 'physical good' such as a car or television. These include:

- **Public Good** – In some ways digital information has the characteristics of a public good in that it is non-rivalrous and partially non-excludable. It is non-rivalrous in use since one person using a piece of digital information does not prevent others from using it. The same quantity and quality is still available after use as well. It is also partially non-excludable since once the information has been published somewhere, it is physically difficult to prevent individuals or businesses from using it even if they have not paid for it.
- **Low or zero marginal costs** – once digital information has been produced, it is not costly to produce an additional copy. For example, the costs of sending an email message to an additional recipient are very close to zero. Consider this in contrast to the cost of sending a message to an additional address via conventional post.
- **High fixed costs of production** – High fixed costs are likely to be incurred due to the collection, organisation and storage of the 'first copy' of digital information. For example it may be expensive to gather survey data.
- **High potential for multiple use and re-use** – Digital information can be re-used in various ways and for different purposes. Furthermore, any resulting products from changes to the information can also be easily shared with other interested parties.

What is the problem?

2.6. Following the adoption of the amending Directive the UK must now decide its approach to implementation in to UK law.

2.7. In making its Proposal to amend the PSI Directive, the Commission argued that its implementation review process had found that the original policy aims had not been met consistently across Member States. General EU-wide issues included:

- Insufficient clarity and transparency, including practical issues;
- Licensing terms that are restrictive or unclear, or lacking altogether;
- Lack of information on data available for re-use;
- Lack of a robust complaints procedure;
- Locked resources;
- Excessive charging and lack of a level playing field, including attempts by public sector bodies to maximise cost recovery, as opposed to benefits for the wider economy;
- Unfair competition between the public and the private sector;
- Incoherent approach within and across the Member States;
- Ineffective enforcement mechanisms.

What is the scale of the problem?

2.8. The amendments are in part modelled on the UK PSI system and so the UK is strongly positioned in terms of PSI⁹. The scale of the problem is therefore limited.

How is the proposed intervention likely to help?

2.9. The amending Directive was intended to remedy the issues outlined above. In particular, amendments to Article 3 are designed to tackle 'locked resources'; amendments to Article 4 provide for a strengthened redress mechanism; amendments to Article 6 attempts to rebalance issues around charging; amendments to Articles 5 and 7 relate to transparency and practical considerations; amendments to Article 1 attempt to ensure that more PSI is available for re-use within than was previously the case.

⁹See the ePSIplatform scoreboard <http://www.epsiplatform.eu/content/european-psi-scoreboard>

3. ANALYTICAL APPROACH

- 3.1. This IA is a revision of an earlier Impact Assessment, prepared following the European Commission's 2011 Proposal to amend the PSI Directive. Extensive information relating to the market context and potential costs and benefits has been collated throughout the course of policy development. Much of this is presented in **Annex C** (Information Related to Costs) and **Annex D** (Information Related to Benefits from Marginal Cost Pricing).

Scope of analysis

- 3.2. The IA process aims to identify as far as possible the impacts of government proposals on society. A critical part of the process is to undertake a Cost Benefit Analysis (CBA) of the proposal. CBA assesses whether the proposals would deliver a positive impact to society, accounting for economic and social considerations. The IA process therefore should not be confused with a *financial appraisal*, which is focused purely on assessing how many resources government would save from certain proposals.
- 3.3. The CBA underpinning an IA rests on answering two basic questions:
- What is the problem that the legislation is seeking to address? In this case, the question is how to transpose an EU Directive into UK law and/or administrative action (see Chapter 2).
 - In what way can Government mitigate this problem? In this case we must assess the costs and benefits of available options for transposition and implementation.
- 3.4. In addressing these questions, the IA has tried to identify as far as possible the impacts, with the aim of understanding what the net impact to society might be of implementing the amending Directive. It has not been possible to quantify some of the costs and benefits at this stage.

EU proposal stage impact assessment

- 3.5. The Commission published its own IA¹⁰ in 2011 as part of its original Proposal to amend the PSI Directive. It estimated a potential benefit of the amendments of €40bn annually across the EU.
- 3.6. It highlighted global competitiveness considerations – contrasting Europe and the US. It also considered the importance of the PSI market relative to other digital markets such as mobile roaming services and navigation devices.
- 3.7. The UK IA differs from the European IA in two key respects:
- The EU IA did not fully consider the opportunity costs implied by changes in pricing policy, which would require reallocation of public funds.
 - The EU IA does not account for the wide range of UK public sector information exempted from the requirement to limit charges to marginal cost.

Articles within scope

- 3.8. Articles 1-9, 11, and 13 of the PSI Directive are amended. The amendments will be copied-out as far as possible but specific options for transposition are required particularly for Articles 4 and 6.
- 3.9. The following points briefly summarise the amendments in the amending Directive, their topic, and whether the UK approach will be attempting to copy-out the amendments to the Article as far as is possible or whether specific implementation options are required.

¹⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2011:1552:FIN:EN:PDF>

- Article 1 (scope): copy-out as far as possible.
- Article 2 (definitions): copy-out as far as possible.
- Article 3 (general principle): copy-out as far as possible.
- Article 4 (processing of requests): the redress mechanism requirements imply specific options must be drawn up in Member States. Otherwise copy-out as far as possible.
- Article 5 (available formats): copy-out as far as possible.
- Article 6 (charging): specific options must be drawn up in Member States to accommodate 6(2)(b) and 6(3). Otherwise copy-out as far as possible.
- Article 7 (transparency): copy-out as far as possible.
- Article 8 (licences): copy-out as far as possible.
- Article 9 (practical arrangements): copy-out as far as possible.
- Article 11 (prohibition of exclusive arrangements): copy-out as far as possible.
- Article 13 (review): Discussed in the Post Implementation Review plan (**Annex B**).

3.10. The most significant issues for implementation involve the redress and charging provisions (articles 4 and 6 respectively) and the implications of both these issues are examined in detail in this IA. It should be noted that a total of four potential approaches to the redress mechanism were considered. In reality, however, there are strong mitigating factors in favour of one particular option. These factors are: first the need to build on established existing expertise in the area of re-use; second, the need to provide legal certainty and assurance in delivering binding decisions; and third to deliver a solution that is proportionate and cost effective. For completeness, details of the other approaches considered can be found in **Annex F**.

3.11. **Table 3.1** below sets out the options for transposition of the amending Directive. Each row is a package representing a combination of elements which would achieve transposition and includes: the Articles intended for copy-out; an implementation route for Article 6 on charging; and an implementation route for Article 4 regarding the redress mechanism.

Table 3.1 Transposition Option Packages				
Option Package	Copy-out as far as possible for Articles 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, and 13.	Article 6 (Charging)		Article 4 (Redress Mechanism)
		Requirements to be defined within public bodies. Criteria set out in Regulations	Implementation through guidance	Retention of existing investigative body with a separate review mechanism, a judicial tribunal
1	X	X		X
2	X		X	X

4. BASE CASE

- 4.1. The 'base case' represents the UK taking no action to transpose the amending Directive. In this situation the UK could be compliant only with those sections which had either not been amended or which required only 'soft law' measures, for example policy measures implemented through the Transparency agenda.
- 4.2. If the UK failed to implement the substantive requirements of the amending Directive it could be subject to infringement proceedings. The Commission has previously demonstrated a willingness to pursue inadequate transposition of the PSI Directive in Sweden¹¹ and in Poland¹². Failure to implement could also lead to legal action brought from within the UK. In both cases legal action would impose costs on the UK Government or on individual public sector bodies.
- 4.3. The competitiveness of UK organisations may also be risked through non-implementation. For example, suppose other member states provided equivalent information for re-use at a lower price. In such a case, the domestic companies in those member states could enjoy a competitive advantage over UK organisations.
- 4.4. It has not been possible to quantify the risks associated with potential loss of competitiveness due to proportionality constraints. Maximum fines for infraction of European legislation are in the hundreds of millions of Euros per annum¹³, although it is unlikely that such a stage would be reached.
- 4.5. As the base case is being compared against itself there are no costs from policy changes to be monetised.

¹¹ <http://epsiplatform.eu/sites/default/files/ePSIplatform%20Topic%20Report%20No.%209%20-%20Sweden.pdf>

¹² <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/801&format=HTML&aged=0&language=EN&guiLanguage=en>

¹³ <http://www.scotland.gov.uk/Topics/International/Europe/Legislation/Infractions>

5. OPTIONS ANALYSIS

- 5.1. This section sets out: a description of the options; and the costs and benefits of the policy proposal as compared against the base case ('do nothing'), setting out associated risks and assumptions.

OPTION 1

Description

- 5.2. Under this option, the amendments will be transposed through copy-out as far as possible. For Article 4 (Redress) the redress mechanism includes the retention of the existing investigative body with a separate review mechanism in the form of a judicial tribunal. For Article 6 (Charging) the proposed approach will see criteria set out in Regulations.

Amendments to Articles 1: Subject matter and scope

- 5.3. The scope is also now extended to museums, libraries, and archives, as they were not covered under the original PSI Directive.

Amendments to Article 2: Definitions

The definitions in Article 2 are not analysed in this IA as they have no economic impact.

Amendments to Article 3: Mandatory Re-Use

- 5.4. The PSI Directive provided public sector bodies with the discretion over whether to permit the re-use of generally accessible documents by external actors. Amendments to Article 3 introduce the presumption that such documents will be available for re-use. This is understood to mean that where a request is made some form of licence will be issued. For museums, libraries and archives the discretion over whether to permit re-use remains.
- 5.5. The amending Directive does not create any new rights of access to information, so these provisions are not relevant to information which, for example, is withheld in England and Wales under the Freedom of Information Act (FOIA).

Amendments to Article 4: Redress Mechanism

- 5.6. Under this option the complainant would submit their complaint via the public sector body's complaints process. If, following that process, the complaint was not resolved satisfactorily the complainant would refer the complaint to OPSI.
- 5.7. Without prejudice to the ability to formally complain, the parties could participate in OPSI's non-statutory mediation process at this point.
- 5.8. On receipt of a formal complaint, OPSI would collect evidence from both the complainant and the public sector body and make a recommendation as to whether the public sector body had complied with the PSI Regulations. OPSI's recommendation would not be legally binding. Experience has shown that many complaints can be resolved at the investigatory stage before complaints are escalated to the next stage. It also supports the need to provide a redress package that is low cost and proportionate.
- 5.9. Either the complainant or the public sector body could refer the matter for review to a Tribunal if they were dissatisfied with OPSI's recommendation. The Tribunal could then uphold OPSI's recommendation or substitute its own decision. Of the tribunals that are currently in operation, The First-tier Tribunal (Information Rights) would be the appropriate one to consider cases concerning the re-use of public sector information.
- 5.10. Currently the Tribunal hears appeals from notices issued by the Information Commissioner regarding breaches of the law on Freedom of Information, Data Protection, and the Privacy and

Electronic Communications Regulations 2003. Its decisions are legally binding. It can uphold a decision or substitute its own decision.

- 5.11. The Tribunal's role would fulfil the impartial review body requirement of the amending Directive. The option of referral to the Tribunal would also manage any perceived potential conflict between OPSI as the investigator and TNA as the policy lead for the re-use of public sector information.

Amendments to Article 5: Available Formats

- 5.12. Article 5(1) would require public sector bodies to make documents and associated metadata available in machine readable formats where possible and appropriate. In this context 'machine readable' essentially means easily accessible by computer programs.
- 5.13. Article 5(2 & 3) make clear that 5(1) is not an obligation on public sector bodies to create or adapt documents where doing so would be burdensome, nor a requirement to continue the production and storage of particular document types with a view to their re-use by other organisations. Article 5 therefore does not impose any new requirements over and above those already contained in UK law and policy.

Amendments to Article 6: Principles Governing Charging

Existing policy on charging for PSI

- 5.14. The position on charging for information which public sector organisations supply on a re-use basis is set out in Annex 6.2 of HM Treasury's *Managing Public Money*¹⁴.
- 5.15. Following the *Cross-Cutting Review of the Knowledge Economy of Government Information* (2000)¹⁵ the policy of licensing and charging at marginal cost for much government information was established, with certain exceptions, notably Trading Funds. This policy was followed up by the *Power of Information Review* (2007). The *Open Data White Paper* (2012) reviewed and extended expectations around information provisions and licensing mechanisms.
- 5.16. The UK Government Licensing Framework (UKGLF) reflects the current government position on licensing and incorporates a default policy of marginal cost charging, together with a process for gaining exception¹⁶ to that policy. The UKGLF is the norm for Crown bodies. Other public sector bodies, with control of their copyright assets, are advised to operate in line with the UKGLF as a matter of best practice. Where Crown organisations are exempted from the marginal cost charging policy, they are required to gain accreditation to the Information Fair Trader Scheme¹⁷(IFTS). Membership of IFTS is also open to non-Crown bodies which operate charged licensing schemes.
- 5.17. The Open Government Licence¹⁸ (OGL) is a free licence with standardised terms and conditions. As such it provides a practical, tested implementation for marginal cost charging. It carries low administrative costs for the UK public sector organisations which deploy it. The UKGLF prescribes the OGL as the default licence for public sector information. This default is mandatory in central government and a best practice recommendation elsewhere. The OGL has also been adopted across the public sector, for instance being used for 86% of datasets published via the government's data.gov.uk portal¹⁹.

Changes to policy on charging for PSI

- 5.18. Under Article 6, many public organisations would no longer be allowed to charge more than the marginal cost of allowing re-use of their PSI. In most cases, this means PSI would be free (as,

¹⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212123/Managing_Public_Money_AA_v2_-_chapters_annex_web.pdf

¹⁵ http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/spend_sr00_ccr.htm

¹⁶ <http://www.nationalarchives.gov.uk/information-management/ifts/cost-pricing.htm>

¹⁷ <http://www.nationalarchives.gov.uk/information-management/ifts.htm>

¹⁸ <http://www.nationalarchives.gov.uk/doc/open-government-licence/>

¹⁹ National Audit Office, *Implementing Transparency*:
<http://www.official-documents.gov.uk/document/hc1012/hc18/1833/1833.pdf>

for example, it costs nothing to email out a copy). This is contrasted to the original PSI Directive, which allowed full cost recovery plus a reasonable return on investment.

5.19. However, there are three exceptions to the marginal cost rule that substantially lower the impact:

- The exception in Article 6(2)(a) applies to, “public sector bodies that are required to generate revenue to cover a substantial part of their costs relating to the performance of their public task”.
 - The requirement to recover costs is not explicitly linked to intellectual property rights or particular documents.
 - Neither pre-approval nor pre-notification is required for the exception to be used.
 - The ‘requirement’ to raise revenue is expressed as a simple statement. In contrast to 6(2)(b) there are no further qualifications attached.
- The exception in clause 6(2)(b) can apply where an organisation is required to recover costs related to a particular document.
 - This applies at the level of particular documents rather than at the level of organisations – in contrast to 6(2)(a). Hence Article 6(2)(b) may apply to organisations which are not cost-recovery oriented as a whole but are required to recover costs for particular documents. Where public bodies consider the application of 6(2)(b), and in particular when they consider whether there is a requirement to recover costs, the UK’s implementation of ‘common administrative practice’ will be important in determining the effective scope of the exception.
 - The requirement should, in the first instance, be ‘defined in law or other binding rules’. Otherwise the requirement must be ‘defined in accordance with common administrative practice in the Member State’.
 - The intention to invoke the exception must be pre-established and made public (via Article 7).
- The third exemption 6(2)(c) applies to, libraries (including university libraries), museums and archives. This means that those cultural organisations which would be brought within scope under the amending Directive would be excluded from the limitation to marginal cost charging.

5.20. Where these exceptions apply, organisations may charge for the cost of collection, production, reproduction and dissemination of the PSI, together with a reasonable return on investment. There would therefore be no change in the charging regimes where the exceptions apply.

5.21. Under Article 6(3), Member States must lay down objective, transparent and verifiable criteria to the calculation of total charges. This aspect cannot, therefore, be copied out. Under this option implementing UK legislation would incorporate all the requirements of the amending Directive relating to charging in Article 6.

5.22. With respect to 6(2)(b) public sector bodies would need to make a decision as to whether they were subject to an administrative requirement or not.

5.23. With respect to 6(3), wording would be included in the implementing legislation providing the criteria for calculation of the amount of a charge.

Amendments to Article 7: Transparency

5.24. Article 7 places requirements on the transparency of public sector bodies’ charging practices. It further requires that they provide adequate information about the means of redress available to re-users. The main amendments are: a requirement for bodies, when applying non-standardised charges, on request to indicate how a particular charge was calculated; and, effectively, that the intention of a public body to charge under Article 6(2)(b) must be pre-established and published.

Amendments to Article 8: Licences

5.25. The amendments to this article are minor and have no economic impact. For this reason they are not analysed in this IA.

Amendments to Article 9: Practical arrangements

5.26. The amendments to this article are minor and have no economic impact. For this reason they are not analysed in this IA.

Amendments to Article 11: Prohibition of exclusive arrangements

5.27. The unique nature of cultural organisations is recognised particularly in the context of digitisation projects, this is reflected in the fact that exclusive agreements are permissible for a period of 10 years.

Amendments to Article 13: Review

5.28. This relates to post-implementation review and is therefore considered in **Annex B** of this document.

Costs of Option 1

Amendments to Articles 1 Extension of Scope to Museums, Libraries, and Archives

5.29. Including museums, libraries, and archives is very unlikely to create cost. The introduction of the 2005 regulations was not associated with loss of revenue for the organisations covered at that point. The charging rules for museums, libraries and archives entering scope now are slightly more flexible than the rules for general organisations affected in 2005. Therefore a similar analysis of zero net change to revenues is anticipated for museums, libraries and archives now.

Amendments to Article 3: Mandatory Re-Use

5.30. Where a standardised, non-transactional licensing mechanism was used to deal with requests by offering a licence at marginal (zero) cost this would not increase administration costs for public sector bodies. The Open Government Licence is such a mechanism and requires very few resources to set up and administrate.

5.31. Where public sector bodies operated a charged licensing policy mandatory re-use for accessible products does not represent an undesirable outcome since requests represent demand for products.

5.32. Hence any costs associated with mandatory re-use are negligible.

Amendments to Article 4: Redress mechanism

5.33. The investigatory role being similar to that which OPSI already discharges under the 2005 Regulations in terms of the activities undertaken by staff investigating complaints.

5.34. Under the existing redress mechanism, in place in the UK since 2005, there have been fifty-two complaints to date, of which seven have gone through the full process of investigation, publication and monitoring of recommendations. Of these, one reached the review stage. Qualitative considerations could point either to increases or decreases in the rate of complaints. In the absence of quantitative evidence to the contrary, the central estimate of volumes under a revised system would most naturally be the volumes just described. However, due to a low frequency, a small number of observations and comparability issues due to systemic changes it is uncertain how reliable this estimate is.

5.35. As such an initial analysis would be that OPSI's role as the third party investigator could continue to be discharged within the same average headcount and thus costs. This is the primary consideration in terms of cost for the investigatory stage of the redress process.

5.36. To calculate the central estimate of costs for the appeal stage we state the following facts and assumptions:

Facts:

- the estimated additional £1500 cost for the investigatory body to defend its recommendation at review;
- the change in cost of providing a review panel each day is approximately £1000-£1500=-£500 (implying costs per day will be £500 lower than under the base case), based on available information compared to the previous instance of a complaints panel;

Assumptions:

- current complaint volumes are maintained, meaning an appeal occurring once every nine years, and caution is again given that it is uncertain how comparable present and future volumes are;
- an appeal requiring 7.7 days of the panel sitting. This assumes that a Tribunal would require the same amount of time to decide the case as occurred under the existing system (it may be the case that a Tribunal takes less time).
- OPSI takes legal advice from TSol when investigating complaints. As such any increase in complaints volume or complexity would necessitate the use of additional resources. As a matter of sensitivity analysis we make the assumption that legal costs would not increase more than threefold. Hence, from a £4k baseline we suggest an upper scenario for OPSI would involve around £12k costs, an increase of £8k.

5.37. Combining this information for a cost in thousands of pounds $C=(1500 + 7.7(1000-1500))(1/9)/1000=-0.26$. As there is no principled way to set an upper and lower scenario here the lower value is set at the central estimate and the upper at zero net cost.

5.38. It should be stressed that due to historically low volumes, the age of the example relating to the cost of a complaint in the appeal mechanism, and changes to the rules being enforced, that although the estimates are the best available given the data, there is a level of uncertainty in the process and thus the realised values are likely to vary from the estimates.

Redress Stage	Source	Estimated change in cost per annum, (£1000s, 2013 rounded to 1 decimal point)			Notes
		Lower	Best	Upper	
1	Investigation Stage	0	0	8	As discussed in 5.31
2	Appeal Stage	-0.3	-0.3	0	As discussed in 5.32
	Total	-0.3	-0.3	8	

Amendments to Article 5: Available Formats

5.39. As there is no obligation for PSI producers to carry out any burdensome activities (i.e. that could impose costs), the costs will be negligible.

Amendments to Article 6: Charging

5.40. Money paid to producers of PSI is a transfer and so any loss of income does not necessarily imply an economic cost (as any money not received by PSI producers is a benefit to those who would have otherwise had to pay).

5.41. Any cost would therefore be the result of a producer of PSI no longer being able to provide a good or service (including PSI) because of a loss of income. This would deprive users of the net benefits (total benefit minus the price they pay) they derive from the goods or services and would deprive the PSI producer of any profit.

5.42. However, these costs are very unlikely to appear in practice because of the exceptions to marginal cost charging. **Table 5.1** shows the income each sector receives from the sale of PSI. The only sectors that appear to rely on PSI for revenue are major information traders and museums, libraries, and archives. These are exempt, as are any other organisations that could lose substantial income from marginal cost charging. The overall economic cost of marginal cost charging is therefore likely to be negligible.

Sector	Revenue
Central Government	0
Major Information Traders*	138.1
Local Government	0
Health	0.1
Museums, Libraries, Archives	55**
Total	193.2

*These include trading funds and other organisations which are involved in significant volumes of charged information trading, for example Ordnance Survey and the Environment Agency. These organisations are typically members of the Information Fair Trader Scheme.

**Based on information from a small number of significant organisations - likely an overestimate. See Annex C for details.

5.43. Total costs are therefore approximately £0.

Amendments to Article 7: Transparency

5.44. In terms of costs to public sector bodies this article changes neither the scope of material available nor the terms under which it is available and is therefore assessed as causing zero net cost.

Amendments to Article 11

5.45. Provision is made for public sector bodies to enter into exclusive agreements where it is necessary for the provision of a service in the public interest. This is subject to the need for the exclusivity being reviewed at regular intervals. This is in line with the PSI Directive and does not impose any additional costs on public sector organisations. This article specifically addresses the question of digitisation of cultural resources and allows cultural organisations to enter into exclusive agreements for a period of ten years, with the potential to extend beyond that if the circumstances warrant it. This means that the effect on commercial arrangements that cultural organisations have on arrangements with private sector companies for the digitisation of cultural resources will be minimal.

Benefits of Option 1

Amendments to Articles 1 and 11: Extension of Scope to Museums, Libraries, and Archives

5.46. When it made its Proposal to amend the PSI Directive, the European Commission argued that the extension of scope to public sector museums, libraries and archives would, *“make all this publicly funded public domain material available for re-use purposes, under the same conditions applicable across the EU. Commercial and non-commercial re-users alike would be able to re-use the vast amounts of valuable content under pre-defined rules with increased legal certainty and more incentives to provide cross-border products and services based on re-used cultural material.”*

5.47. While the practical effect of the Articles may be less dramatic than this, it would be the case that re-users of such public sector material could have increased confidence in how their requests would be treated, and the outcome of such request. Increases in re-user confidence would in principle lead to increases in the amount of re-use and the benefits derived from that, such as products for consumers and jobs.

Amendments to Article 3: Mandatory Re-Use

- 5.48. The Commission holds that much public sector information across member states is underexploited, although the UK is well positioned in terms of delivering existing PSI responsibilities. Mandatory re-use would serve to bring some such data into active exploitation, increasing the value generated from it.
- 5.49. The economic effects of these changes are likely to centre on the increased certainty with which organisations and individuals are able to obtain authorisation to re-use. By removing uncertainty over whether permission may be granted for re-use of accessible documents the policy would reduce transaction costs and so increase levels of re-use.
- 5.50. This provision may decrease costs for re-users in aggregating data from across the public sector, by ensuring areas of commonality with regards to the availability and conditions of a licence. Hence the obligation to allow re-use is likely to lower transaction costs, both at the level of individual re-use requests where re-users can be more confident and where public sector decision making processes are simplified, and by making it easier to aggregate data from different organisations.

Amendments to Article 4: Redress Mechanism

- 5.51. In the Impact Assessment supporting its original (2011) Proposal to amend the PSI Directive the European Commission made an economic argument for strengthening the redress mechanism. The thrust of this argument was that where redress mechanisms were weak this, “prevents re-users from enforcing their rights against monopoly suppliers of PSI, leading to inefficiencies on some markets with negative impacts on competition and innovation and, ultimately, on consumer welfare.” Hence there would be a general expectation of benefits from strengthening of the redress mechanism: with re-users more confident of their ability to enforce their rights and consequently greater market efficiency and consumer welfare.
- 5.52. It has not been possible to monetise these benefits in this analysis due to proportionality constraints. This is because a full monetisation strategy would require detailed survey work to analyse counter-factual confidence levels of re-users and changes in their propensity to undertake business ventures and the extent and value of those opportunities.

Amendments to Article 5: Available Formats

- 5.53. The economic effect of changes to this article is designed to reduce the costs to re-users of developing products and services from public sector information. This would occur where standardised formats reduced the technical effort required to incorporate public sector information into products and services. Hence it is likely to increase demand by reducing costs for re-users.

Amendments to Article 6: Principles governing charging

- 5.54. Benefits would be expected due to greater and more varied use of public sector information by businesses and other organisations. A further consequence of this would be increased consumer surplus among the end users of intermediate products.
- 5.55. **Annex D** contains a detailed discussion of these and related issues, and provides a foundation to monetise such benefits. However, the monetisation method can provide results only where the price of revenue generating information is lowered to marginal cost. As noted above it is understood that the major pieces of revenue generating information are exempt from the amending Directive, there is nothing to apply the method to.
- 5.56. There will be non-monetised benefits where generally accessible PSI for which re-use is not currently permitted or revenue generated, is made available for re-use at marginal cost price. This is potentially an important benefit. For example, the Shakespeare Review in 2013 suggested that, “The value of public sector information to consumers, businesses and the public sector in 2011/12 was approximately £1.8 billion” (within a range of £1.2-2.2bn). A sizeable proportion of this valuation came from Open Data which had not previously been revenue generating. While changes to the PSI Directive should not be expected to produce a benefit of exactly the same size this illustrates the potential benefit of similar actions.

Amendments to Article 7: Transparency

5.57. In economic terms the implied effects of Article 7 are to lower barriers to re-use by making it clear to potential re-users what the applicable practical arrangements are. It has not been possible within the requirements of producing a proportional analysis to quantify exactly how much increased transparency on terms and conditions of licensing might boost re-use.

Amendments to Article 11: Prohibition of exclusive arrangements

In economic terms the aim of Article 11 is to extend the scope of material which is made available for re-use by prohibiting exclusive agreements except in exceptional circumstances. This aspect is in line with the PSI Directive. The article permits cultural bodies to enter into ten year exclusive agreements in the case of digitisation projects in order that the cost of recouping the high costs of digitisation can be recouped by the cultural sector organisations and their commercial partners. It has not been possible to assess to what extent the prohibition of exclusive arrangements might boost re-use.

Net Impact of Option 1

5.58. The best estimate of overall net monetised impact under Option 1 is zero. This stemmed from the analysis of amendments to Article 6 and to Article 4. In particular the best estimate of costs relating to Article 4 was negligible in economic terms. The analysis of Article 6 was that there could be monetised benefits if there were monetised costs, but that there were no monetised costs.

5.59. There are non-monetised benefits for the private and civil society actors from a number of Articles, generally due to increase in the confidence with which they would be able to deal with public sector information holders or decreases in the transaction costs associated with re-using PSI. The overall net non-monetised impact is therefore potentially significant and positive.

OPTION 2

Description

5.60. Under this option, the amendments would still, in the main, be transposed through copy-out and transposition of Article 4 (Redress) will be the same as in Option 1. For Article 6 (Charging) the proposed approach would see criteria set out in administratively set guidance linked to the implementing legislation.

Amendment to Article 6: Marginal Cost Charging

5.61. Under this option, implementation would be through administratively set guidance. This guidance would address the requirement of Article 6(3) by setting out the required criteria. This option would fail to follow normal good practice through the creation of an additional administrative document associated with the implementing Regulations, the purpose of which would be to qualify a power to charge.

Costs of Option 2

5.62. These are the same as Option 1.

Benefits of Option 2

5.63. These are the same as Option 1.

Net Impact of Option 2

5.64. This is the same as Option 1

Annex A: Specific Impact Tests

- A.1. When drawing up an Impact Assessment it is required to consider the influence of the policy on specific areas of society and the economy. With respect to the amending Directive

Human Rights

- A.2. No specific impact is foreseen in this area.

Justice Impact Test

- A.3. Issues discussed above in connection with the redress mechanism.

Health Impact Assessment

- A.4. No specific impact is foreseen in this area.

Competition Assessment

- A.5. There is likely to be an improvement in levels of competition within and between the public and private sectors. Due, primarily, to the lowering of barriers to entry in markets which make use of public sector information. These effects are discussed in the main body of the text above and in **Annex C**, and not recapitulated here.

Small Firms Impact

- A.6. Introduction of amendments to the PSI Directive is again likely to be beneficial to small businesses through reductions in the barriers to entry of markets which depend on public sector information. These effects are discussed in the main body of the text above, in **Annex C** and in **Annex E**, and not recapitulated here.

Carbon Assessment

- A.7. No significant direct impact on carbon emissions is foreseen. Indirect effects may exist, for example where re-use of public sector information leads to transport efficiencies. However are not able to present any quantification of such indirect effects here.

Equalities Impact Assessment

- A.8. Digital inclusion issues exist where certain socio-economic groups, such as the elderly and those from lower-income households, do not have the same ability to take advantage of opportunities arising from information technology. The extent and economic importance of the digital divide is set out in a report prepared for the government's Digital Champion Martha Lane Fox in 2009²⁰. As changes arising from public sector information policy are likely to be manifested in the range and price of digital products and services, the effect of such policy on digital inclusion issues is of interest here.
- A.9. Where access to the internet poses a general social problem we note that this gap is an active target of government policy. Organisations such as the Government Digital Service²¹ and the cross-sector body Go On UK²² are engaged in efforts to reduce the digital divide. Their success would imply a reduced distributional impact over time. This leaves open the question of wheth-

²⁰ www.parliamentandinternet.org.uk/uploads/Final_report.pdf

²¹ <http://digital.cabinetoffice.gov.uk/2013/06/14/introducing-digital-inclusion-team/>

²² <http://www.go-on.co.uk/>

er, among citizens able to utilise digital services, applications of public sector information would place certain groups at a particular disadvantage.

- A.10. It may be informative to consider a case study on the user base of an actual application which re-uses public sector information. mySociety (part of an independent charity) has a mission to, “help people become more powerful in the civic and democratic parts of their lives, through digital means.” It runs TheyWorkForYou.com, a well-established website which re-uses Parliamentary information. For example the site republishes Hansard (Parliamentary transcripts) in such a way that a user can find a profile of a particular member’s speeches. The site receives around 200,000 unique visits per month, a figure which can double at key points in the political cycle, such as general elections. In June 2011 mySociety published a report²³ on users and usage of TheyWorkForYou.com. The report found, in comparison to the British internet user population: an over representation of men; some over representation of people over the age of 54; an over representation of disabled users; a possibility of bias in terms of ethnicity; an over representation of high income over medium income users, with lower income users fairly represented; and a bias towards those with higher education. Taken together these indicators suggest a tempered, yet beneficial impact on digital inclusion. For further discussion of the representativeness of the sample for users of the service, please see the report. Whilst illustrative, this remains a single case study.
- A.11. Turning now to the range of digital services available. Reducing barriers to the re-use of public sector information would increase the range of products and services available. If this argument is true then the effects may serve to reduce digital inclusion issues. For example, where information is available via the general internet, enabling its re-use may result in mobile services becoming available.
- A.12. An illustration of this tendency to extend the reach of public sector information can be seen in the outputs of the LinkedGov HackCamp 2011, where re-usable public datasets were used to make mobile friendly services for bus information in Greater Manchester and Foreign and Commonwealth Office travel alerts²⁴²⁵.
- A.13. The Government Digital Service identifies extension of access to public services to mobile platforms as an important tactic in the reduction of digital inclusion issues²⁶. The intuition here arises from access to mobile phones being more prevalent than home broadband. For example, there are around four times as many SIM cards per capita as fixed broadband lines in the UK²⁷. Hence, where re-use of public sector information increases the mobile accessibility of information it may serve to ameliorate rather than to exacerbate digital inclusion issues.

²³ http://blogs.dev.mysociety.org/wp-content/uploads/2011/06/TheyWorkForYou_research_report-2011-Tobias-Escher1.pdf

²⁴ <http://linkedgov.hackcamp.org.uk/hacks/a-bus-for-that>

²⁵ <http://linkedgov.hackcamp.org.uk/hacks/are-you-okay>

²⁶ <http://digital.cabinetoffice.gov.uk/2011/11/11/mobile/>

²⁷ <http://scoreboard.lod2.eu>

Annex B: Post Implementation Review Plan

<p>Basis of the review: A Post Implementation Review is, in effect, required through Article 13 of the amending Directive by July 2018. This requires the Commission to review the policy at European level. It also requires Member States to submit reports on the application of the amending Directive. It is suggested that the UK prepare its report in accordance with the suggested timescale. We also suggest that the topics required are considered in economic terms in order to fulfil the dual purpose of a domestic Post Implementation Review. This will be efficient in terms of administration, and may assist officials to influence European deliberations on the success and development of the policy.</p>
<p>Review objective: to consider whether the transposition of the amending Directive to the UK has been complete and the chosen implementation options continue to represent the best choices.</p>
<p>Review approach and rationale: The review should cover topics including the following: the availability of public sector information; the conditions under which public sector information is made available; the functioning of the redress mechanism; review of implementation of Article 6 on charging.</p>
<p>Baseline: As set out in this Impact Assessment.</p>
<p>Success criteria: Anticipated effects prove correct.</p>

Annex C: Information Related to Costs

- C.1. The purpose of this Annex is to provide supporting evidence on the potential monetisable costs of marginal cost charging policies for public sector information required for the analysis of the impact of the Options presented above.

Central Government

- C.2. We described above how the UK Government Licensing Framework established the Open Government Licence as the mandatory default tool for enabling the re-use of Crown copyright. Exceptions to this default will be discussed in the next section on major information traders. This section relates to impacts on central government generally.
- C.3. The Open Government Licence is free, as such, where it is used it effectively implements a marginal cost charging policy. For information already made available under this licence a statutory marginal cost charging policy under Article 6 would not represent a change of charging policy. In such cases there would be no financial impact through loss of revenue for public sector bodies.
- C.4. The marginal cost charging policy could conceivably discourage public sector bodies from engaging in innovative behaviour. Due to concerns about their ability to recover costs from the provision of new information products and services. However, three points mitigate this risk to a negligible level. First, the exceptions contained in 6(2) would be relevant to such situations, enabling cost-recovery if it was required. Secondly, a similar policy is already in effect in central government, where pre-approval must be sought to charge for re-use of Crown copyright information. Thirdly, a truly innovative activity would likely lie outside an organisation's established public task, and thus outside the amending Directive's scope.
- C.5. We must also consider the financial impact of mandatory re-use where the Open Government Licence applies. As the Open Government Licence is non-transactional, there is no resource cost required for the issuing of licences. Hence increased volumes of re-use should not translate into increased administration costs.
- C.6. As a result of the above the amendments with respect to marginal cost charging and mandatory re-use should not have a financial impact on central government bodies operating under the default policy of the UK Government Licensing Framework. This analysis is consistent with the influence which the default licensing policy under the UK Government Licensing Framework itself had on the design of amendments to the amending Directive.

Major Information Traders

- C.7. This category includes the members of the Information Fair Trader Scheme, which consist both of Crown copyright bodies granted delegations of authority to operate charged licensing schemes, and members from the wider public sector.
- C.8. The Office of Fair Trading as part of its Commercial Use of Public Information (2006) market study undertook a survey of UK public sector bodies²⁸. This found an income accruing from the supply, sale and licensing of information total revenues of £394m. Around 85% of this, or £340m accrued to organisations operating under delegated authority. Among these bodies £295m revenue accrued to the largest five traders. The importance of a small number of major traders is therefore recognised in this separate discussion.
- C.9. The public sector is also a key source of revenue for the organisations in this category. For example, many public bodies require mapping in order to plan and deliver public services. This

²⁸ http://www.oft.gov.uk/shared_oft/reports/consumer_protection/oft861a.pdf

is delivered through the One Scotland and Public Sector Mapping Agreement commercial collective purchase agreements with Ordnance Survey. This circulation of revenue within government will influence any analysis of the need for additional public expenditure; since it is assumed that existing public funding would not be withdrawn under a marginal cost charging policy.

- C.10. In practice the cost-recovery ratio varies between organisations. Where appropriate we use information from the most recent annual reports and accounts to calculate this ratio. The ratios are set out in the table below, with N/A entries for organisations for which government is not a major customer.
- C.11. Deloitte were contracted to produce a market assessment report²⁹ as part of the Shakespeare Review of Public Sector Information (2013). Commenting on Trading Funds alone, Deloitte estimated the cost of providing public sector information at around £395m each year. Taking into account the revenue received to these organisations from government, the additional gap under a marginal cost charging policy was estimated to be on the order of £143m each year.
- C.12. For the purpose of compiling this Impact Assessment, in 2012 The National Archives consulted full members of the Information Fair Trader Scheme to reassess the revenue generated by the major information trading organisations. Where necessary this has been combined with details from recent annual reports and account. Figures are set out in **Table 5.2** below. Figures for 2013 have not been sought since it is felt the 2012 figures will be comparable and that a combination of survey fatigue and broadening of the exceptions would negate the value of revised information.

Table C.1 Information Trading Revenue in Trading Funds (2012)				
Organisation	Relevant Revenue from Provision of Information (£millions, 2012)	Proportion of Such Revenue from UK Government Sources	Revenue Gap Under MC Charging (2012 £millions per annum)	Qualifies for Article 6(2)(a) Exemption
Driving Standards Agency	2.2	N/A	2.2	Yes
Land Registry	3.1	N/A	3.1	Yes
Met Office	163.3	0.84	26.1	Yes
MHRA	2.7	N/A	2.7	Yes
Ordnance Survey	138.9	0.62	52.8	Yes
Registers of Scotland	4.1	N/A	4.1	Yes
UK Hydrographic Office	32.7	N/A	32.7	Yes
Total	346.90	-	123.7	

- C.13. Companies House is not show in **Table C.1** as although Companies House holds significant quantities of information. Unlike information traders such as Ordnance Survey and the Met Office, Companies House does not originate the information it holds. The copyright in the information held on the Companies Register is owned by the companies that submit the information and third party copyright falls outside the scope of the amending Directive. It should also be

²⁹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198905/bis-13-743-market-assessment-of-public-sector-information.pdf

noted that the £13m annual income generated by Companies House from the Companies Register relates to the cost of statutory registration rather than from information trading and authorising re-use. This activity and income stream will remain unaffected by the amending Directive.

C.14. The 'Revenue Gap Under MC Charging' column represents the additional public expenditure that would be required to sustain the costs of continuing to provide public sector information if marginal cost charging were applied across the board – whether via the amending Directive (highly unlikely) or otherwise. This includes direct licensing revenues. Also, for certain organisations, the column would include revenue from products or services that are likely to be significantly affected by increased competition from products that re-use material licensed from the body at marginal cost. The figures in that column attempt to present an upper bound on the potential cost of a marginal cost charging policy, before accounting for various organisation-specific grounds on which products might fall outside the scope of the amending Directive and which are discussed further below.

C.15. The figure relating to relevant revenue at the UK Hydrographic Office was derived by considering historical information (2007) on the proportion of product sales related to UK waters. Such revenue would be at risk under marginal cost charging where organisations redistributed directly licensed data as chart products. Added to this was the revenue from licensing of data itself as an input to other works. Where UK data contributed to the charting of other areas, this method would underestimate range of material within the scope of amending Directive.

Table C.2 Revenue At Other Major Information Traders (2012)	
Organisation	Relevant Revenue (£millions, 2012)
British Geological Survey	2.2
DVLA	1.5
The Coal Authority	5.3
Environment Agency	3.4
Health and Safety Laboratory	0.1
LPS Northern Ireland	1.5
National Offenders Management Service	0.4
Total	14.4

C.16. To clarify, the Cabinet Office's Efficiency and Reform group was included in this section in the appraisal stage Impact Assessment due to revenue related to Prince2 and ITIL products. In the interim this business has moved to the private sector and so is not considered to fall within the scope of the PSI Directive.

Local Government

C.17. Local Authorities individually own the intellectual property rights in and control the re-use of their public sector information. As such, knowledge of information trading activities in local government is less complete than in central government, where control of Crown copyright and its re-use is centralised within one organisation.

C.18. In order to determine the scale of information trading activities, and consequently the potential for loss of revenue through marginal cost charging four pieces of evidence are reviewed.

- C.19. In 2010 The National Archives undertook comprehensive research³⁰ of the copyright policies employed within local government across the UK. This involved reviewing 434 local authority websites. Among the variables recorded were the policy type, use of exceptions and whether terminology connected to the Re-use of Public Sector Information Regulations was used in the policy.
- C.20. The study found that 55% of authorities employed a 'contact us' policy, suggesting queries would be dealt with on a bespoke basis. In contrast 41% of authorities employed a policy which did not provide any contact details or invitation to engage in licensing discussions. A further 4% of local authorities employed a waiver or open licence which implied that no revenue would be generated from licensing of website content. This evidence suggests that awareness of, and position on, intellectual property licensing issues was not consistent amongst local authorities.
- C.21. As a separate variable, 11% of local authorities were recorded as using terminology from the re-use regulations in their website copyright policy. A requirement of the regulations is that information on licensing, including conditions and standard charges, be published by public sector bodies. As such, where bodies employ the re-use regulations to generate revenue, regulatory compliance would suggest that terminology from the regulations would appear in published policies. Hence the above result should be read as indicative of a low level of commercial licensing activity.
- C.22. In April 2012, The National Archives, in preparation for this impact assessment, initiated discussions on evidence collection with the Department for Communities and Local Government and the Local Government Association. The survey developed focussed on the revenues, costs and volumes associated with licensing activity in local authorities over the financial years 2010-2011 and 2011-2012.
- C.23. The survey was sent via email to 353 Local Authorities via the Department for Communities and Local Government's communications team. The deadline was set for 28 days following delivery of the form. The National Archives received eleven eligible responses. Of these nine were from Borough or District Councils and two from Unitary Authorities.
- C.24. No responding authority reported positive revenue from the licensing of re-use during the two years concerned. Eight authorities reported zero administrative costs while a further two did not report their administrative costs. One authority reported administrative costs of £50, this occurred through drawing up an agreement which was not carried through to completion.
- C.25. The response rate to the survey was low (3%); in particular the lack of County level representation is of concern. We should recall that a low response rate is not the same as a small sample size since we cannot assume the data are missing completely at random. Given this missing data problem we interpret the responses heuristically, considering two reasons that non-response may bias estimates of revenue levels. First, it is possible that the lack of reported income in the responses arises from a bias towards organisations which do not generate revenue, since for such organisations responding takes less effort. However, secondly, the covering letter explained that the survey was to determine the extent of financial risks to Local Authorities. Hence there was a clear financial incentive for organisations to respond. We suggest that the second motivation would in general be stronger than the first in organisations which enjoy significant revenue. This second motivation would suggest the reported revenue would be above the true average, and since reported revenue was zero while income cannot be less than zero, we would have to conclude that the average level of revenue enjoyed by local authorities was zero. If the missing data could be considered as missing completely at random, then the fact that the remaining responses from the first tranche were all zero would imply zero as the average revenue with great confidence.

³⁰ <http://epsiplatform.eu/content/research-local-authority-copyright-policies-2-march-2010>

- C.26. Due to the low response rate a second survey was planned and executed. The target group consisted of twenty of the largest counties and cities from across the UK, in order to complement and compensate for the lack of representation in the initial work. The National Archives contacted the organisations initially by phone in order to identify the most appropriate member of staff, before sending through the questionnaire. For non-responders, contact was followed up after a fortnight. Seven authorities responded to the questionnaire, representing a response rate of about 35%. One major city and three counties reported that they did not license information or data for re-use. Two counties responded that they would license information, one of which generated £50 revenue with £40 costs, and the other of which reported no revenue and negligible costs. One city responded, but not via the survey form, to the effect that it was not aware of any relevant licensing activity, but that its constituent boroughs might be.
- C.27. The expectation from these two pieces of research should therefore be that both revenue and administration costs from the licensing of PSI appear to be negligible within local government. This is not to say that local government information is not of value either economically or socially, but that it is not commercially exploited at present. As such, this evidence would suggest the impact of marginal cost charging on local authority revenues would be near nil.
- C.28. One information service within local government which has in the past been linked to significant revenues is property search. These are reports supplied by local authorities to assist the sale of a property by providing information on it and its surrounding area. The PIRA (2000) study *Commercial Exploitation of Europe's Public Sector Information*³¹ found estimated income from local land searches to be £259m (2000, adjusted by HMT GDP Deflator to 2011 prices: £335m). The Office of Fair Trading's 2005 report *Property Searches: A Market Study*³² concluded that, "We estimate the value of the market for local property searches in England, Wales and Scotland to be around £190m." (Adjusted to 2011 prices via GDP Deflator: £219m)
- C.29. The pricing of access to property search information is, however, subject to the Environmental Information Regulations 2004.³³ Those regulations limit the scope for charges and thus revenue generated from provision of access to property search information.
- C.30. As a result of these developments in terms of information access law, local authorities might instead come to rely more heavily on licensing of re-use to recover the costs of providing information products and services. In this case a statutory policy of marginal cost charging would remove this as an option.
- C.31. Using licensing to generate revenue from property search information would be unlikely to generate as extensive or as reliable an income as access charges. This is because in some cases the information concerned may either not attract copyright protection (for instance the address of a property) or not be reproduced in a manner that would infringe copyright, hence not require a licence (e.g. if the requestor is the property owner).
- C.32. Based on the above discussion it is not felt that revenues related to the sale of property search reports should be included in an analysis of the impact of changes to the PSI Directive on Local Government. This means that the financial impact would be limited to the generic re-use revenues generated within local authorities. As reported from two pieces of survey work, these revenues were found to be negligible. This evidence is consistent with 2010 evidence on local authority website copyright policies.
- C.33. The main implication of the evidence discussed above is that local authority revenues from the licensing of public sector information are negligible. Only a single council was definitively found to raise any income through licensing, and then with a net benefit to the authority of £10 on £50 revenue.

³¹ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/pira_study/commercial_final_report.pdf

³² http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft810.pdf

³³ <http://www.legislation.gov.uk/uksi/2004/3391/contents/made>

Health Sector

- C.34. To understand the potential impact of amendments to the PSI Directive on the Health sector it is necessary to understand the distribution of its information holdings. NHS Trusts collect significant quantities of information relating to the services which fall within their responsibilities. However, increasingly, the Health and Social Care Information Centre (HSCIC) is responsible for the aggregation, quality assurance and dissemination of these data sets.
- C.35. This distribution of information in the Health sector is matched by a significant set of commitments on transparency made through the Department of Health's information strategy³⁴. The strategy calls for, "the release of Big Data: making large routine public service data sets available." This includes plans for specific datasets, for example on comparative GP outcomes data. An approach building on previous successes such as the release of heart surgery data³⁵. The related impact assessment³⁶ estimated benefits of £0.786bn (2012) from improved information services, for example through more effective use of GPs, a reduction in costs associated with paper transfer of information and de-duplication of online resources. While these elements included go beyond the publication of public sector information, they may be indicative of the scope of benefits to be gained from improved access to information in the health sector generally.
- C.36. The Department of Health did not have evidence of NHS organisations generating significant revenue through charging for the re-use of public sector information. On this basis the main anticipated effects would come from changes to administrative costs, primarily through a potential increase in the volume of complaints as NHS organisations embed the new rules within existing processes.
- C.37. The HSCIC provided feedback on the amendments to the PSI Directive. Though acknowledged to be separate these amendments were interpreted in the context of changes to the Freedom of Information Act through the Protection of Freedoms Act. In particular it was felt that NHS organisations would feel pressure on administrative costs both in reacting to requests to re-use information, which could presently be declined, and in the technical aspects of making information available in machine readable formats. For clarity, it should be noted that as discussed above the PSI Directive would not impose requirements to reformat data or create new products. HSCIC also commented that in many cases domestic UK policy initiatives went further than an amended PSI Directive would. HSCIC did not hold any evidence that NHS organisations generated significant revenue from charging for the re-use of public sector information, although in its own case it was possible that consultancy services might be provided on a commercial basis in addition to more accessible public data.
- C.38. As a Trading Fund, analysis of the position for the Medicines and Healthcare products Regulatory Agency (MHRA) is included in the section above on Major Information Traders.
- C.39. The Clinical Practice Research Datalink (CPRD) was highlighted in correspondence with Health sector officials as a further example of information trading in the health sector. Consulting the CPRD on its business model and governance structure made clear that it is a joint venture between the MHRA and the National Institute of Health Research. Furthermore CPRD expects that as a service for research and the transfer of research results it would not fall into the scope of the amending Directive as defined in Article 1. As a consequence, we do not include figures relating to its revenue as a risk in this section.
- C.40. In correspondence, the National Institute for Health and Clinical Excellence (NICE) reported revenue from publications and copyright royalties on the order of £130k per annum on average.

³⁴ <http://www.data.gov.uk/sites/default/files/DH%20Open%20Data%20Strategy.pdf>

³⁵ <http://www.guardian.co.uk/lifeandstyle/2009/jul/30/heart-surgery-death-rates-fall>

³⁶ http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_134185.pdf

Cultural Sector

- C.41. The proposed amendments would, for the first time, bring museums, archives and libraries (including university libraries) within the scope of the amending Directive. Other cultural institutions, including public service broadcasters and opera companies would remain outside the scope of the amending Directive. The following two paragraphs provide context on the scale of current re-use activities in relevant parts of the cultural sector.
- C.42. Within the sector there are key organisations whose licensing-related revenues are substantial. As a crude estimate, extrapolating from information held on four members of the National Museum Director's Conference, an average of £1.7m across the organisation's 32 members could suggest revenues of around £54m. This should be read as an indicative upper bound due to the greater availability and engagement of organisations substantially involved in re-use and so is likely to be a significant over-estimate. It may also include revenue related to print publishing of less relevance to this Impact Assessment.
- C.43. In each of the cultural subsectors there exist many smaller organisations for which information on licensing revenues and costs is more difficult to obtain. As an estimate for the value of relevant revenue within local archive services, CIPFA data (Archive Services 2011) suggests a figure of £1.29m as total sales revenue; this is equivalent to around 1.8% of gross spending in the organisations. Relevant licensing revenue will form only part of this figure, suggesting a figure in the hundreds of thousands would be realistic. If this were repeated across museums and libraries, a figure in the very low millions could sensibly represent the relevant licensing revenue among smaller museums, libraries and archives.
- C.44. Turning to the requirements placed on the sector by the amending Directive. We first note that Article 6(2)(c) excludes museums, libraries and archives from the marginal cost price cap. Instead, the relevant limit is, "the total income from supplying and allowing re-use of documents over the appropriate accounting period shall not exceed the cost of collection, production, reproduction, dissemination, preservation and rights clearance, together with a reasonable return on investment." This is a broader phrase than that applicable to other exempted organisations due to the inclusion of 'preservation and rights clearance'. Another difference is that the charges are to be calculated in line with 'applicable accounting principles' rather than the 'criteria laid down in Member States'.
- C.45. The price cap wording described above is similar to that used in the PSI Directive, which has been in force in the UK since 2005. It is understood to enable full cost recovery together with a reasonable return on investment. As such it would not be the case that museums, libraries and archives would be obliged to carry financial losses as a result of an inability to recover costs, including the additional elements noted above. However if an 'unreasonable' return on investment were being generated then the cap would decrease the revenue such an organisation might collect. Insufficient evidence is available on cost accounting and fees within this sector to comment on how likely it is that there may be an 'unreasonable' element to current revenues.
- C.46. Mandatory re-use would not apply to the cultural sector. Instead, wording equivalent to that in the current PSI Directive and the PSI Regulations would apply. Historically, under this wording, the granting of licences for particular material has been discretionary. Although non-discrimination clauses may apply *between* users of the same material for similar purposes once it has been offered for re-use to one user. A key implication for the analysis here is that where a cultural organisation considered that the business case for the licensing of particular material was weak, it could decline to license that material. This discretion reduces the scope for forced increases in administrative costs.
- C.47. The amending Directive would extend the prohibition of exclusive agreements to museums, libraries and archives. However, the rules for exclusive rights for 'digitisation of cultural resources' would involve a longer grace period (10 years rather than 3), with review required on the 11th year and every 7th year after that. The intention behind these rules being to preserve private sector investment in the cultural sector. Where it is typical for private partners to bear the

costs of scanning, transcription, website development etc. Benefits to the public from such agreements could include earlier and wider access to digitised cultural material. To illustrate the significance of this issue, the British Library estimates that the value of materials digitised through public private partnerships over the last 6 years amounts to around €55m (or around £45.6m at 1.23 EUR/GBP).

- C.48. It is considered best practice for cultural bodies to retain the intellectual property in digitised materials, and this, over the long term, may be of significant value. The revised amending Directive appears to wish to further encourage this practice. However, the text of Article 11 (2a) would require only the provision of a copy of the digitised material, and not establish a rule on ownership of intellectual property in it. As such ownership of rights would remain an issue to be determined by contract between the parties.
- C.49. The National Archives liaised with the National Museum Directors' Conference for the purposes of better understanding the licensing practices employed within the cultural sector. It is noted that many of the commercial arrangements relating to intellectual property reported through this work would fall outside the purview of the amending Directive. For instance, those in relation to trademarks, design rights and copyright in software. Evidence gathered via this correspondence confirmed the variety of funding models employed by the cultural sector. In particular a number of organisations confirmed the existence of partnerships with private sector organisations which would be relevant to the issue of exclusive licensing analysed above. We should again note that the amending Directive applies only to documents whose supply falls within the public task of relevant organisations, and it may be the case that many cultural organisations would argue that digitisation activities are outside of their public tasks.
- C.50. In summary: the exclusion of museums, libraries and archives from the marginal cost charging policy significantly reduces the scope for loss of revenue under the amended PSI Directive. The remaining scope for loss of revenue, where such revenue is 'unreasonable' is difficult to quantify. Exclusion from the mandatory re-use policy reduces the scope for forced administrative costs. The introduction of limited non-exclusivity provisions to the sector may have detrimental effects on the formation of public private partnerships for digitisation of information held by cultural sector public bodies although such partnerships may be detrimental to competition. A number of case studies on cultural sector intellectual property would not fall within scope of the amending Directive by virtue of the fact that they contain third party copyright material which falls outside the scope of the amending Directive.

Annex D: Information Related to Benefits from Marginal Cost Pricing

- D.1. The purpose of this Annex is to provide the detail underpinning our summary in Chapter 5 of the available evidence on the benefits of marginal cost charging policies for public sector information.
- D.2. To recap: the expected mechanisms for these benefits began with increased demand for PSI by industry as an input to production, stimulated by decreases in price and reduced transaction costs. Price reductions were expected enable a wider range of organisation types (or business models) to exploit PSI, such as SMEs and charities. The resulting expansion of supply would ultimately enable consumers to enjoy a wider range of PSI-based products at lower prices. The anticipated result would then be an increase in total welfare.
- D.3. This section attempts to discuss the benefits to economic welfare generated by such a mechanism. Since the millennium a number of studies valuing the economic potential of PSI have been published. These include academic, regulatory and consultancy works alongside those instigated by the European Commission itself. This section outlines some of the most helpful and influential works with relevance to the Proposal under consideration. It then considers what estimates could be drawn from them in a UK context. It is fair to say that the majority of the work focuses on the use of PSI by industry, rather than the surplus consumers enjoy from PSI products. The latter element would be important where consumer surplus was large compared to producer surplus (for end-user products), a situation which could well be the case with PSI products, e.g. free smart phone applications. We therefore suggest further avenues of research at the end of this section.
- D.4. The Office of Fair Trading's report *Commercial Use of Public Information*³⁷ (CUPI, 2006) estimated the size of public sector information to the economy to be £590m (2006). This estimation of market size attempted to take into account both revenues accruing to public sector information holders, alongside a measure of consumer surplus. It was expected that reforms could raise this figure to around £1.1bn. The necessary reforms occurring particularly in the areas of high pricing and access to 'upstream' data. This implied a potential economic benefit from the reforms on the order of £0.51bn (2006).
- D.5. Were marginal cost charging under mandatory re-use introduced without exception, unduly high pricing would be resolved by definition. The scheme would also be likely to remove incentives towards restriction of access to upstream data by effectively removing the ability to charge. Mandatory re-use could potentially resolve some of the issues around lack of exploitation of data. Hence, an adjusted (HMT GDP deflator to 2011 prices) CUPI based estimate of the potential economic benefit could be in the order of £0.573bn.

Use of GDP Deflator in Adjustments

- D.6. Using the GDP deflator may underestimate the growth in the potential size of PSI related markets. One reason to believe this lies in the increased adoption of consumer computing technology in the form of smartphones, laptops and tablets³⁸. This trend would work to increase the potential customer base for products using public sector information as an input, for example, GPS enabled navigation. The UK telecommunications regulator, Ofcom, reports, "The widespread take-up of mobile data services, including dongle-based mobile broadband and smartphone use, resulted in an increase in global data consumption of 159% in 2010."³⁹ These trends could have accelerated the growth in the potential size of the market for PSI-based

³⁷ <http://www.ofg.gov.uk/OFTwork/publications/publication-categories/reports/consumer-protection/ofg861>

³⁸ <http://idgknowledgehub.com/mobileidg/idg-mobile-survey/>

³⁹ <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr11/international/>

goods, as consumer capacity to make use of PSI-based goods in terms of computing devices and data connections grew rapidly – particularly for products suited to mobile devices, e.g. real-time transport advice.

- D.7. There is also reason to believe that the volume of information available to consumers has risen swiftly. Hilbert and Lopez (2011) estimate the global volume of stored information to grow at 23% per annum⁴⁰. If the public sector followed this trend there may simply be more PSI in 2012 relative to, say, 2006. This trend should also imply that there would be more complementary information available for re-use, indirectly increasing the value of PSI.
- D.8. If public sector information has benefitted from these trends, then the general GDP deflator may not adequately reflect the growth in potential of PSI-based markets. We do not present or use an alternate adjustment methodology here, but these facts could be seen as indicative of growing market potential.
- D.9. In 2008 HM Treasury commissioned an analytical work, *Models of Public Sector Information Provision via Trading Funds*⁴¹, from scholars at Cambridge University (lead author Rufus Pollock). This paper analysed the costs and benefits of a move to marginal cost charging for six large UK Trading Funds. The increases in net benefit estimated in the analysis, by organisation were: Ordnance Survey (£156m), Companies House (£1.9m), the Met Office (£1.03m), the UK Hydrographic Office (£0.34m), Land Registry (£1.2m) and the Driver and Vehicle Licensing Agency (£3.7m). The total increase in benefit would then be £164m (2008). An adjusted estimate (HMT GDP deflator to 2011 prices) would be £175m. The net cost (after tax increases) to government being around £15m (2008). The stated methodology would now overestimate tax take on production as corporation tax has been reduced since publication.

Ordnance Survey in the Evidence on Benefits

- D.10. One issue in generalising the above analysis for impact assessment purposes is the concentration of anticipated benefits in Ordnance Survey. In this subsection we discuss some of the developments with respect to Ordnance Survey which have significance in the interpretation of both CUPPI 2006 and Pollock 2008.
- D.11. Ordnance Survey was the highest profile case discussed in CUPPI. Between 2009 and 2011, partly in response to that report, a programme of business change took place. This included the launch of OS OpenData, which provides free access to a number of datasets under permissive licensing terms⁴². With respect to its core commercial products Ordnance Survey has reduced the number of specific use contracts in operation and engaged more positively with regulators. These actions are likely to have helped to realise a proportion of the envisaged benefits, leaving a reduced potential for gains from further reform.
- D.12. The concentration of benefits in Ordnance Survey cited in Pollock 2008 (around 95%) suggests the changes in licensing and pricing over the 2009-2011 period may have had an impact on the amount of benefit to be realised from a marginal cost charging policy. In particular, if the products within the OS OpenData range are, or represent a close substitute to the categories in the 2008 analysis, then moving to a statutory marginal cost charging regime where the policy is practically in effect should not be expected to yield extensive further benefits.
- D.13. The categories of products analysed for the benefit given in Pollock 2008 included Large Scale Topo and Transport Network Products. Neither OS MasterMap Topography Layer nor OS MasterMap Integrated Transport Network were included in the OS OpenData product range. This implies that the release of OS OpenData would not fulfil the conditions required by the 2008 analysis. However, some of the products released may form sufficiently close substitutes to decrease the additional benefit it may be possible to realise from further changes to charging poli-

⁴⁰ <http://www.sciencemag.org/content/332/6025/60.abstract>

⁴¹ www.berr.gov.uk/files/file45136.pdf

⁴² <http://news.bbc.co.uk/1/hi/8597779.stm>

cy. To summarise the impact of these statements: the reforms over 2009-2011 are unlikely to have met the conditions required to deliver the full benefits envisaged by the earlier analyses.

D.14. Ordnance Survey commissioned a study into the economic impact of its OpenData offering. The full report is not yet available for review. However, the published synopsis, *Assessing the Value of OS OpenData™ to the Economy of Great Britain -Synopsis*,⁴³ concluded, “The study estimates that the OS OpenData initiative will deliver a net £13.0 million - £28.5 million increase in GDP in 2016. The main components of this increase are net productivity gains (£8.1 million – £18.2 million) and additional real tax revenues (£4.4 million – £8.3 million).” As the document does not present all the information which went into the analysis it is not straightforward to assess how much weight should be placed on them. Nevertheless, the stated conclusions accord with expectations in other papers of economic gains to be had from marginal cost charging policies being applied to geospatial information. We cannot include the benefits suggested in this report elsewhere in this Impact Assessment as the policy is already in force and so its effects will not be changed by the transposition of revisions to the PSI Directive.

The Commission’s Impact Assessment

D.15. The European Commission, as part of its preparation for proposing amendments to the PSI Directive, commissioned a study from Information Economics, *Review of Recent Studies on PSI Re-use and Related Market Developments*⁴⁴ (Vickery, 2011). The review concluded that “aggregate direct and indirect economic impacts from PSI applications and use across the whole EU27 economy are estimated to be of the order of EUR 140 billion annually.” While easier access, including implementation of marginal cost charging could lead to an increase of around €40bn in PSI related economic activity across the EU27. If distributed in a similar fashion to the UK/EU proportion of GDP or population, this would imply an estimate of about €5.2bn (about £4.2bn) for the UK (2011) for the benefits to be derived from the policies under consideration in this Impact Assessment.

D.16. The paper presented a review of literature relating to policies connected to the amending Directive. The headline values presented relate to syntheses of literature on the effects of policies such as marginal cost charging and also to related issues such as increased public sector efficiency through more effective re-use of its own data. As such, while we note and present the Commission’s estimate we will not make significant use of the figures in deriving our own benefits estimate due to the risk of overlapping evidence.

D.17. The headline value presented in the Commission’s paper was in part extrapolated from UK papers by Pollock^{45 46}, in particular *Welfare Gains From Opening Up Public Sector Information in the UK* (2010). The original estimates given in that paper were £4.5-6bn for the high-range and £1.6-2bn for the mid-range. By high- and mid-range is meant the values of model parameters used to represent elasticity of demand and multiplier effects. A mid-point for the mid-range estimate would be about £1.8bn (2011). Due to sensitivity analysis considerations while we report this figure, we will down-weight it when developing a best-estimate of benefits. We discuss some of the issues connected to sensitivity of elasticity and multiplier parameters within the model in the next subsection, which the non-technical reader may decide to skip.

Sensitivity of parameter values in Pollock 2010

D.18. An important issue in interpreting the results of *Welfare Gains from Opening Up Public Sector Information in the UK* Pollock (2010) lies in the paucity of empirical evidence on the values of

⁴³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/207692/bis-13-950-assessing-value-of-opendata-to-economy-of-great-britain.pdf

⁴⁴

http://ec.europa.eu/information_society/policy/psi/docs/pdfs/minutes_psi_group_meetings/presentations/15th/02_market_value_psi_eu_vickery.pptx

⁴⁵ http://rufuspollock.org/economics/papers/psi_openness_gains.pdf

⁴⁶ http://rufuspollock.org/economics/papers/economics_of_psi.pdf

model parameters. In particular the value of the multiplier parameter, which expresses how important a role in value chains public sector information plays. This is acknowledged in the work, which uses ranges of values and also acknowledges that the values of key parameters will vary across products. We will use the mid-range estimate as the elasticity assumptions made are closest to (although more optimistic than) those made in CUPI Annex G⁴⁷ (2006) which were grounded in a study specifically of the UK PSI market.

D.19. We are not aware of any closely related benchmarks for the multiplier parameters used. The grounds described for the parameters used included: new products; complementary products; reductions in transaction costs; public sector efficiency gains. While these grounds are compelling, the mapping to particular numerical values of the multiplier parameter is made as an assumption.

D.20. To discuss the sensitivity of the estimates provided within the context of the model as given. This gave as the welfare change equation:

$$\Delta W = F(-(1-\theta)(1-g) + \theta \frac{\lambda \varepsilon}{2})$$

D.21. Where θ is a distributional weight for the project under consideration whose value is given as 0.8. The numeraire used being given as the marginal cost of public funds. F is the revenue under consideration, λ is the multiplier, ε elasticity and g the proportion of F coming from government already. After rearranging this becomes:

$$\Delta W = \frac{2}{5} F(\lambda \varepsilon + \frac{-(1-g)}{2})$$

D.22. As this equation contains both costs and benefits, from a sensitivity perspective we may be interested in the requirements on parameters λ and ε for ΔW to change signs: i.e. the point at which the model produces zero change. Therefore setting:

$$\Delta W = 0$$

$$\lambda \varepsilon = \frac{(1-g)}{2}$$

D.23. If we assume that government does not currently contribute to the funding and would be required to make up the entire cost of provision, $g = 0$, then:

$$\lambda \varepsilon = \frac{1}{2}$$

D.24. Hence if demand is unit elastic then the multiplier need would need to be one half or greater for the change in welfare to be non-negative. Alternatively, if the multiplier is one, elasticity of one half is required, or $\lambda = \varepsilon \approx 0.71$ would also produce the result. Any objections to $g = 0$ should take account of the fact that $g > 0$ would reduce the requirements on λ and ε and thus make $\Delta W > 0$ easier to achieve. With respect to ε , CUPI used values of 0.3, 0.8 and 1.5 at low-, mid- and high-ranges respectively, and we might expect these values to be lower than those used by Pollock since the price cut under consideration in CUPI was smaller than that implied by a marginal cost charging policy. The model employed in CUPI did not involve a multiplier. If $\lambda = 1$, as seems conservative since this value would represent re-use of PSI neither unduly shrinking nor expanding other markets, then the model would suggest benefits at either mid or high ranges. As a consequence we might conclude that the model, on its own terms, is only moderately sensitive to the particular values of λ and ε .

⁴⁷ http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft861g.pdf

D.25. The next refinement might be to analyse the shape of the assumed (linear) demand curve in order to investigate its effects on the estimates produced, although producing such an alternate model is beyond the scope of this Impact Assessment.

Revenue base used in Pollock 2010

D.26. The relatively large numbers reported above (£4.5-6bn, £1.6-2bn) in relation to *Welfare Gains from Opening Up Public Sector Information in the UK* are derived from a model involving a particular revenue base.

D.27. There are reasons to suggest this base, and hence the benefit figure derived from it, should be smaller. The revenue base used took into account both information sales by government to government and government to the private sector. It may be fair only to assume extremely limited elasticity of demand in the government to government segment. To illustrate, the One Scotland and the Public Sector Mapping Agreement have essentially provided government organisations with all the Ordnance Survey data they might require for internal business purposes. Hence if benefits measure how much the market might expand from its current size, we should exclude from the revenue base that portion of the turnover which we should not expect to expand at all.

D.28. The turnover of public sector information holders, including sales to government, is F . However, as discussed above, some of this revenue comes from elsewhere in government. It is reasonable to assume that public sector demand for such data is nearly satiated through existing arrangements, and so should not be expected to expand due to a lowering of prices in the same way as private sector demand might. So we must then remove from F that revenue which comes from elsewhere in government. CUIPI gave this proportion as $g = 0.45$ (oft861, 3.10). Re-running the analysis with $F' = (1 - 0.45)F = 0.55 \cdot 0.5 \cdot (550 + 400) = 261.25$, then, using equations and mid-range parameters ($\lambda = 5, \varepsilon = 2$) from the paper a midpoint estimate would be £1.045bn ($0.4F'\lambda\varepsilon = 0.4(261.25)(5)(2) = 1045$). Inputting this document's estimate of the total relevant government to non-government revenue (circa £150m) the benefit figure, using the same 'mid-range' parameters would be around £0.6bn. Hence a range of values taking the model as given and using a revised base with the 'mid-range' parameters would be around £0.6-1bn. We provide this value here in order to illustrate the significance of the base on the projected benefits.

Deloitte (Belgium) (2011)

D.29. Further work procured by the European Commission in 2011 included Deloitte Belgium's *Models of Supply and Charging for PSI*⁴⁸. This work was a collection of case studies relating to European public bodies and the effect of transition from cost recovery to marginal cost charging policies. The study found that price decreases stimulated increased demand in terms of units by a significant factor. Austria's BEV was reported to have implemented price cuts of up to 97% in 2006 and by 2010 revenue was 46% higher than it had been previously. This was primarily due to increases in demand for various products of 250-7000% making up for in volume what was lost in price.

D.30. The case of Austria's BEV is not necessarily analogous to the UK because, while it is difficult to judge with any confidence from the information available, it may be the case that prices in the UK currently⁴⁹ are more similar to Austrian prices post- rather than pre- policy change⁵⁰ (rough comparison of 1:50000 scale mapping for internal business use). However the general effect should be considered when assessing the costs of moving to marginal cost charging.

⁴⁸ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/report/11_2012/models.pdf

⁴⁹ <http://www.ordnancesurvey.co.uk/oswebsite/docs/ordnance-survey-business-portfolio-price-list.pdf>

⁵⁰ http://epsiplatform.eu/sites/default/files/ezpublish_media/Schennach.pdf

D.31. In terms of overall economic benefit, the Deloitte paper did not venture a value, and hence its main contribution is towards the assessment of costs and elasticity of demand. In the next subsection we comment on the reliability of download statistics as a proxy for demand.

Interpretation of Download Statistics

D.32. We interpret estimates of elasticity of demand for PSI as an input to products which have been derived from figures based on downloads of published data cautiously. Where an organisation at first employs cost recovery policies, it is reasonable to expect that all licensed customers are engaged in productive activities. In transitioning to a situation where data is published on the web with no access charge, it is reasonable to expect that a proportion of downloads are for activities which do not directly lead to increased economic activity such as curiosity, repeat downloads, or, least optimistically, automated web crawlers. Some of these, such as speculative downloads may, however, represent the first step in a series of actions leading to an innovative new product; although presently we are not aware of any evidence of the proportion or value attached to this segment. This point would be less applicable where the figures were based on use of application programming interfaces (APIs) for granular access to public datasets. Since the bulk of API requests would be more likely to come from genuine applications it would be a better indicator of productive use.

Koski (2011)

D.33. An empirically focussed work was conducted by Heli Koski of the Research Institute of the Finnish Economy, *Does Marginal Cost Pricing of Public Sector Information Spur Firm Growth?*⁵¹ (2011). This study used financial data from firms across the European Union, USA and Australia which were involved in geographic information consuming industries; such as architecture, engineering activities and related technical consultancy.

D.34. The main question considered by the work was whether marginal cost charging policies had an effect on the revenues of individual organisations. Two econometric models were employed for this purpose, and these looked at revenue data from firms operating in the markets detailed above. One point to note is that the international data used would have placed an emphasis on the Spanish move to marginal cost charging which occurred during the 2000-2007 period studied.

D.35. The primary conclusion of the work was that countries employing a marginal cost charging policy for their geographic PSI could expect 15% higher revenue growth in the relevant industries, particularly among small and medium enterprises.

D.36. The next subsection comments further on the models used in Koski (2011) in further detail and develops estimates of welfare benefit in a UK context. To summarise, this estimate of welfare benefit is found to be on the order of £550m. Given the length and complexity of the chain of reasoning involved, this should only be taken as indicative of the possible order of the effect.

Interpretation of Koski 2011

D.37. To comment in further detail, the paper⁵² employed two econometric models. The database used was of international firm-level financial data spanning 2000-2007. Of the countries in the database which had also changed PSI charging policy to marginal cost, Spain was most heavily represented; although Austria, Australia and the USA also contributed towards data on companies operating under marginal cost regimes. The 2004 policy change coincided with a period of strong growth in the Spanish construction sector⁵³ which may have particularly benefitted the sector under consideration; however similar trends were at work in other EU member states^{54,55}.

⁵¹ <http://ideas.repec.org/p/rif/dpaper/1260.html>

⁵² <http://www.etla.fi/wp-content/uploads/2012/09/dp1260.pdf>

⁵³ <http://www.bde.es/webbde/SES/Secciones/Publicaciones/InformesBoletinesRevistas/BoletinEconomico/11/Ene/Files/art3e.pdf>

⁵⁴ http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Construction_sector_statistics

Some controls for the effects of general GDP growth appear to have been made, meaning the remaining issue would be whether the relative importance of GI in the economy was comparable to the UK.

- D.38. This composition of the available data motivated the author's choice of Spain as the treatment group in Model 2, a difference in difference model comparing the performance of Spanish companies before and after the policy change with international comparators in countries practising cost recovery pricing throughout.
- D.39. Model 1 was a random effects model run on cross-national data. Due to the composition of the database, as described above, Spanish companies would have dominated the pool of companies operating under marginal cost charging. The results showed statistically significant increases in sales growth for SMEs and All companies for companies operating under marginal cost charging regimes; however for Large companies the effect was negative, though not statistically significant.
- D.40. The results showed that Model 1 explained only a low proportion of variability in the data and that Model 2 explained slightly more. So, while marginal cost charging may have a statistically significant effect on sales growth, the magnitude of this effect may be modest in comparison with the other factors affecting sales in firms. However, our primary interest here was in whether the marginal cost charging for certain PSI had an effect on revenue in relevant firms, which it appears to.
- D.41. The results of this paper provide evidence for the growth enhancing potential of marginal cost charging for SMEs and the private sector in general. It is harder however, to translate this into an overall welfare benefit for two reasons. First and foremost is the question of the base we should consider: the current size of the affected sector. Secondly, the main result of this work is an increased growth rate, meaning the benefits in year 2 are greater than year 1, which, while encouraging, makes calculation of the benefit we should consider less reliable. In line with the per annum methodology used throughout this paper we will take the value after three years as a per annum proxy, since Koski observes that the benefits of increased growth become apparent after two years.
- D.42. To translate the increased growth rate into an economic benefit we may perhaps consider the UK IT industry as the base. As a whole, this industry was valued at £30.6bn in 2010 with a growth rate of 3.6%⁵⁶. If this sector grew 15% faster as a result of marginal cost charging policies, the results would be worth £170m in year one, and £530m in year three.
- D.43. Turning to other sources for information on revenue base and growth rates: in 2006 the European Commission sponsored report *Measuring European Public Sector Information Resources*⁵⁷ was published. This valued the European re-use sector at €26.1bn. Translating this to the UK would imply a sector value of £3.81bn (1.1232 EUR/GBP, UK-GDP/EU-GDP=0.13).
- D.44. ConsultingWhere similarly valued the UK Location related hardware, software and services industry at £1.23bn and suggested a growth rate for the industry of 2-3%⁵⁸. Using these figures, the supposed increased rate of growth would be worth £4.61 million per annum.

⁵⁵ <http://www.bis.org/ifc/publ/ifcb31j.pdf>

⁵⁶ http://www.innovateuk.org/_assets/pdf/Corporate-Publications/ICT%20Strategy.pdf

⁵⁷ http://ec.europa.eu/information_society/policy/psi/docs/pdfs/mepsir/final_report.pdf

⁵⁸ <http://www.consultingwhere.com/reports.html>

Table D.1
Interpretation of Koski 2011 in Terms of Industry Growth

Source	Industry Size	Growth Rate	Additional Industry Size After One Year	Additional Industry Size After Three Years
ICT Sector - Technology Strategy Board	£30.6bn	3.6%	£170m	£530m
Re-use sector - MEPSIR	£3.81bn	"	£20m	£60m
Geographic info sector - Consulting Where	£1.23bn	2.5%	£10m	£20m

Calculated by comparing industry size with original and boosted growth rates. Reported anticipated effects rounded to nearest £10m.

D.45. These figures could reasonably be seen as ranging from wide to narrow. The former because not all software relies on PSI, the latter because not all PSI is geographic.

D.46. It should be noted that the figures in **Table D.1** do not take into account consumer surplus or multiplier effects. The consumer surplus will depend on the pricing model in these downstream markets. We have assumed that producers enjoy half the total surplus, so that the figures in the table above would be doubled. This is a conservative estimate given the lack of information on the share of surplus enjoyed by producers. All these effects suggest the estimates derived above are likely to significantly undervalue the effect of the policy change. Pollock (2008) attributes 30% of total surplus to producers. A report published by the McKinsey Global Institute⁵⁹ suggests that in the US, consumers of internet services enjoyed a surplus of €46bn on a willingness to pay of €61bn, implying producer surplus of around 25% of total welfare. Hence we would argue that 50% is a conservative choice for this parameter as the lower the value the more benefits to producers are multiplied to represent total welfare changes. Issues related to consumer surplus are discussed further at the end of the *Evidence on Economic Benefits* section in the context of scope for further research.

D.47. Since the other studies considered in this section attempt to account for consumer surplus it is necessary to adjust for this in order to compare like with like. We take the average of the low and high values after three years, £275m, to work on as this represents the kernel of the re-use industry together with a proportion of the industries likely to directly benefit from spill-over. Adjusting for consumer surplus as one half of total surplus would imply a value on the order of £550m. Given the length and complexity of this chain of reasoning, the value above estimate should be taken only as indicative of the order of the effect.

ACIL Tasman (2008)

D.48. The Australian work by ACIL Tasman *The Value of Spatial Information*⁶⁰ (2008) valued the detriment to the Australian economy of inefficient access to key geographic information at \$0.5bn (2008). Converted at 0.658 AUD/GBP (to £329m) and scaled in line with UK-GDP/AUS-GDP=1.77 (to £582m) then adjusted via the HMT GDP deflator to 2011 prices this would translate to a benefit of about £0.62bn. The detriments included in this figure included: access to fundamental data – relevant to the proposals on mandatory re-use considered here; data formats – relevant to the proposals on data formats considered here; and suitability of the licensing frameworks – relevant to proposals regarding mandatory re-use and marginal cost charging.

⁵⁹ http://www.mckinsey.com/insights/mgi/research/technology_and_innovation/internet_matters

⁶⁰ http://www.crcsi.com.au/Documents/ACILTasmanReport_full.aspx

Relevant to the pricing issues considered in this impact assessment was the consideration of detriment stemming from inconsistent application across regional jurisdictions of a national best practice policy of marginal cost charging for fundamental data promulgated in 2001. As such the Australian situation presented, while not providing a perfect analogy for the current UK position, shares a number of meaningful similarities.

- D.49. The report also discusses the ‘dramatic increase’ in demand for spatial data following lowering of prices after the 2001 policy change. For one group of fundamental datasets, distribution increased from 90,438 copies in financial year 2002/3 to 1,524,206 in 2005/6, or around 1700%. As discussed above raw supply statistics should be interpreted with care in this context due to curiosity downloads, web crawlers etc. However as only 60% of supply was via the internet even discounting that portion would imply a rise in quantity supplied of nearly 700%.
- D.50. One cautionary point on translation of this study to the UK environment. Australia has over the last decade experienced strong performance in sectors relying heavily on geographic information, in particular resource extraction⁶¹. This may imply the figure above would be an overestimate in the UK context. However, as indicated by the title, the study concerned spatial information, which constitutes only a subset of the information within scope of the amending Directive (albeit a major one). In the absence of other risks, this would indicate the figure being an underestimate. It is difficult to judge which effect would predominate.
- D.51. On the dataset level other assessments have also shown benefits from moving to a free of charge regime. The Danish Enterprise and Construction Authority, assessing the impact of its 2002 in *The Value of Danish Address Data* (2010) move to release address data for free concluded, “In 2010 it is estimated that social benefits from the agreement will be about EUR 14 million, while costs will total about EUR 0.2 million.”⁶² Clearly if this return on investment were realised across wider classes of PSI the resulting benefit would be considerable. However, the extent to which forgone revenue is accounted for as a cost is not clear in this work.

Summary of Literature

- D.52. The following table summarises the benefits that might arise from adoption of a marginal cost charging policy for all public sector information, together with mandatory re-use. This is not a scenario for benefits within the current Impact Assessment since, as discussed elsewhere, effective price changes are not anticipated for major classes of information. It is instead intended to calibrate our understanding of the possible effect of increased use of public sector information.

Table D.2. Summary of Estimated Benefits from Charging Changes	
Basis for estimate	Estimated annual benefit of MC charging with mandatory re-use (2011 prices)
CUPI (2006)	£0.57bn
Pollock (2010, low)	£1.8bn
Vickery (2011, headline)	£4.6bn
Koski (2011)	£0.55bn*
Acil Tasman (2008, adjusted for UK)	£0.62bn
*From 15% higher growth rate, see text for further details.	

⁶¹ http://www.minerals.org.au/file_upload/files/annual_reports/AR_2011_Final.pdf

⁶² http://www.adresse-info.dk/Portals/2/Benefit/Value_Assessment_Danish_Address_Data_UK_2010-07-07b.pdf

D.53. The relevant available literature suggests a benefit on the order of £550-4600m could be obtained if all accessible public sector information were priced at marginal cost. Taking a conservative balance of the evidence summarised above as our best estimate, we might expect a benefit (in the order) of £600m from marginal cost charging with mandatory re-use. We avoid providing a formally weighted average in order to mitigate the risk of spurious precision being read into the analysis.

Scope for Further Research

D.54. This section discusses the scope for further research on the benefits related to marginal cost charging for public sector information. In particular issues created by the treatment of consumer surplus that may be problematic for previous research, particularly the possible underestimation of benefits, and how these might be addressed.

D.55. Much of the work presented considered the value of changes in charging policy in terms of the increased activity of firms which purchase PSI as an input to production. In order to present a view of total welfare changes, certain assumptions are made in relation to consumer surplus. Consumer surplus being the value of the additional benefit enjoyed by consumers over and above what they had to pay for a product.

D.56. Certain aspects of the markets for public sector information products may cause difficulties for these approaches to consumer surplus. For instance OFT CUP1 Annex G suggests, "the demand for unrefined information products already reflects the consumer surplus that the ultimate end user obtains from refined products bought from private sector suppliers using unrefined PSI as an input." There are a range of business models where this may not necessarily hold, particularly charitable/civic projects but also free provision of services by private sector providers.

D.57. In the case of private sector provision of free/low cost products the assumption which may fail is that private sector revenue is derived from sales of products or services to consumers. Noting the advertising based business model deployed by significant consumer IT service providers such as Google we find that the revenue of such ventures may be derived largely from the willingness to pay of other entities for a consumer's attention rather than from the sale of a product or service to a consumer. This may place the products or services outside of conventional markets to a greater or lesser extent. Where this analysis extends to public sector information based products it implies that the link between the willingness of intermediary re-users to pay for PSI and consumers' willingness to pay for PSI-based products will be distorted.

D.58. We should also consider why sales revenue is not then generated in addition to advertising revenue. This may be the case due to similar cost structures for consumer data products as for 'upstream' data products: high fixed costs and low variable costs implying low marginal costs of production. In the extent to which a market for consumer products was competitive this structure should result in downward pressure on prices to (near zero) marginal costs – implying losses where fixed costs were not recouped. One possible outcome would be monopolistic competition based on product differentiation. This could perhaps be seen to be the case in the 'freemium' model where consumers essentially upgrade from a free product to one with premium features.

D.59. Benkler's *The Wealth of Networks*⁶³ offers further discussion of potential commercial advantages to be gained from offering products at no charge.

D.60. In the case of charitable or civic applications of PSI, as no revenue would be generated through the product or service then cash payment for data as an input to production represents a cost which may be more than such projects can bear. Again this is because the resources of not-for-profit or charitable ventures are not necessarily related to the willingness to pay of consumers

⁶³ http://www.benkler.org/Benkler_Wealth_Of_Networks.pdf

for their services (and resources may in any case be expressed in volunteer time not easily convertible to cash).

- D.61. Let us assume that the above argument holds: that in certain markets, such as internet services or mobile phone applications, re-users' willingness to pay for PSI is not reliably related to consumer surplus. The question then remains of how to value consumer surplus for public sector information products. Research in this vein would also be suggested by HM Treasury's *Green Book*⁶⁴ and a supplement to it⁶⁵ in relation to the valuation of non-market impacts. One set of methods focus on stated preference. One methodology in this category is contingent valuation, essentially asking people what they would pay for something. Another methodology is choice modelling, which involves offering individuals a series of sets of options and observing which options are chosen. The resulting data is then used to analyse the value attached to features of the options. The Life Satisfaction approach differs from stated preference methodologies by focussing on use of existing aggregate data to determine the effect of an intervention on overall life satisfaction.
- D.62. Choice modelling through discrete choice experiments may be of particular interest. The method was developed in the context of public infrastructure projects, with its early deployment on San Francisco's BART transport by Daniel McFadden⁶⁶, and has been used in other UK regulatory contexts, for example by OFCOM⁶⁷ and by Transport Scotland⁶⁹. Certain characteristics of PSI product markets, e.g. software features, may be particularly congruent with choice models, given the similarity of choice modelling to 'freemium' models where different bundles of features attract different prices. Choice modelling may also be able to cope with the counterfactual nature of the appraisal at hand, since observational data will not be available on exposure to products and services not yet developed.
- D.63. As an illustration of the type of work possible, consider a consumer who visits the beach and the value to them of a website or smartphone application which integrated data on bathing water quality, tide times, weather, mapping, parking charges, public amenities etc. The type of access, data and the price would then form factors in a choice model, leading to estimates of willingness to pay. Additional research would be needed regarding the population likely to use the service, and the costs of developing it, in order to analyse surplus. This process may need to be repeated over several themes in order to provide a robust understanding of the relationship between public sector information and end-consumer surplus.
- D.64. The scope for further practical research into consumer surplus is highlighted here since where Government makes further commitments to improving available evidence this analysis may serve to inform planning and prioritisation. Due to time and resourcing requirements such research was not an option for this Impact Assessment.

⁶⁴ http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

⁶⁵ http://www.hm-treasury.gov.uk/d/green_book_valuationtechniques_250711.pdf

⁶⁶ http://www.nobelprize.org/nobel_prizes/economics/laureates/2000/press.html

⁶⁷ <http://stakeholders.ofcom.org.uk/binaries/consultations/ddr/researchrpt.pdf>

⁶⁸ <http://www.ofcom.org.uk/static/archive/ra/topics/economic/surveys/pmr.pdf>

⁶⁹

http://www.transportscotland.gov.uk/files/documents/analysis/LATIS/TMfS07_HighOccupancyVehicleLaneSPResearch_21102008.pdf

Annex E: Non-Monetised Impacts

- E.1. The Commission has previously argued that there amending Directive should be beneficial through empowering citizens and improving public services. This aligns with the UK policy approach set out in the Open Data White Paper and Open Government Partnership National Action Plan.

Benefit: Transparency and Civic Empowerment

- E.2. We first comment on a possible analytical approach that might be used to investigate the citizen empowerment and democratic perspective. This would consider the economic benefits of good governance, and then whether increased re-usability of PSI might help to increase it.
- E.3. Research on public governance by organisations such as the OECD⁷⁰ and WTO⁷¹ suggests that transparency provides a tool to increase the efficiency of public procurement. One mechanism suggested is that availability of data on public procurement will enable the identification of suspicious activity or discrimination in addition to widening access to potential opportunities. Clearly efficiencies in public procurement, if realised, would release public resources for other projects or reduce the need for taxation.
- E.4. Accessible information on public procurement at a European level would typically fall within the scope of the PSI Directive. More effective communication of information on public procurement to businesses may also increase competition for contracts and effect exports. The question then is whether, in practice, organisations would make use of these data sources and produce intelligence products in the manner suggested by this theory. EuroAlert⁷² is one such company, based in Spain, which provides services of this nature on procurement across the EU.
- E.5. This evidence makes credible the argument that increased transparency may reduce inefficient processes in government and so have direct economic and fiscal impacts. The magnitude of these effects is unclear and would likely need to be studied in detail by data theme, for instance on procurement, appointments and legislation.

Benefit: Efficient Use of Public Services

- E.6. With respect to public service improvements another approach might consider the ability of citizens to navigate public services effectively. In particular where better access to information, through a more diverse set of products based on PSI, would help them to do so, and the benefits accruing if it did.
- E.7. **Annex C** notes on financial impacts to the Health sector that improved information systems (and not PSI re-use alone) are assessed as having a potential benefit of £0.79bn, part of which related to patients more efficiently using GP services. Furthermore the impact of releasing performance data on heart surgery was noted in particular as contributing to a reduction in mortality.
- E.8. However, evidence for the impact on choice and outcomes of releasing non-personal public performance data relating to health is not conclusive. The authors of a Cochrane Collaboration review, *Public Release of Performance Data in Changing the Behaviour of Healthcare Consumers, Professionals or Organisations*⁷³ published in November 2011, concluded that, “The small

⁷⁰ <http://www.oecd-ilibrary.org/docserver/download/fulltext/5kmh2r7qpstj.pdf?expires=1343828327&id=id&accname=guest&checksum=939CE87C56E47BF5ACD3B0F1B75ABE13>

⁷¹ http://www.wto.org/english/tratop_e/gproc_e/gptran_symp_oct02_pdf_files/symp_oct02_2_hoe_eve_e.pdf

⁷² <http://en.blog.euroalert.net/2012/05/euroalert-analyses-with-exporting.html>

⁷³ <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004538.pub2/pdf>

body of evidence available provides no consistent evidence that the public release of performance data changes consumer behaviour or improves care. Evidence that the public release of performance data may have an impact on the behaviour of healthcare professionals or organisations is lacking.”

- E.9. This however relates to evidence on changing service user behaviour through performance data. Whether such data is useful for informing public debate on policy and by such improving public services in other ways, is not considered.

Benefit: Encouraging Early Stage Enterprise in Information Technology

- E.10. One suggested benefit of the amended Directive is that more relaxed terms of re-use for PSI would encourage entrepreneurship. In particular that PSI could form a ‘training ground’ or ‘showcase’ for early stage enterprises.

- E.11. One case study may serve to illustrate how this supposed effect might work in practice, if not establish its magnitude of effect in the general case. In a series of articles ‘*Bootstrapping a \$30k profit/month company from our internship earnings*’ FIPLAB founder Rishi Modha discusses⁷⁴ a turning point in the fortunes of the venture,

By May 2010, we were almost ready to take up jobs in the City when I came across a newspaper article about the new London bike rental system, or ‘Barclays Cycle Hire Scheme’ as it’s known here, which was due to launch at the end of July 2010. In that article, the Mayor of London, Boris Johnson, challenged developers to create a mobile app for the upcoming bike scheme. This seemed like the opportunity we had been waiting for. That night, I phoned Anirudh and he agreed that we should pursue this idea as it was a great way to get the FIPLAB name known throughout London.

[...]

An unexpected side-effect of our London Cycle app’s popularity and press coverage was that a lot of media/tech people in London thought of FIPLAB first when they were thinking of getting an app developed. We literally got at least one email every day with people eager to hire us for development work.

- E.12. This case study is also of significance to the argument that independent re-users may efficiently deliver elements of public services at little or no cost to government. This stands in contrast to some web applications developed directly by the public sector, “Greater costs are incurred where government itself is responsible for repackaging data to aid accessibility and interpretation; for example set-up costs of £300,000 and annual running costs of more than £150,000 in the case of police crime maps.”⁷⁵

- E.13. For an alternative narrative on Barclays Cycle Hire Scheme data from another independent developer, Adrian Short discusses the issues⁷⁶.

Cost: Restriction on Future Government Activity

- E.14. In **Annex C** evidence is presented on the revenue from licensing of information received by different areas of the public sector. These figures cannot take into account the potential for new products and services to be developed within the public sector on a commercial basis. If marginal cost charging policies have the effect of removing commercial and cost-recovery policies from the available funding models, this may limit the development of new products and services.

⁷⁴ <http://blog.fiplab.com/bootstrapping-a-30k-profitmonth-company-from>

⁷⁵ <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmpublic/102/10206.htm>

⁷⁶ <http://blog.adrianshort.co.uk/2011/04/28/boris-says-bye-bye-to-indie-boris-bikes-developers/>

- E.15. It would then not be possible to assess at some later point whether in fact a product or service should move from a commercial, cost-recovery model to a public goods model. This would represent an opportunity cost to government, and potentially also to the wider economy.
- E.16. However, it would seem likely that such a hypothetical innovative project would either fall outside an organisation's public task or may be exempted from the marginal cost provisions by Article 6(2)(b).

Cost: Risk of Reduced Data Quality

- E.17. Although it is not expected to occur, if existing funding models for public sector information were disrupted this could imply risks for the sustainability of data quality. A primary effect would be the risk to data quality where an organisation could not afford to maintain its service offerings. The impact here would vary across organisations depending on the significance of the revenue concerned, the flexibility of internal budgeting, and the commitment of the organisation to maintaining a particular product or service. Also a change from self-funding to greater reliance on central funds may diminish the autonomy of the organisations, for instance in making investment decisions on technology infrastructure. If this under-investment scenario held, it could imply a risk that, over time, the quality of services provided may not keep pace with the demands of industry, causing economic detriment. The possible impact of any reduction in data quality on downstream markets has not been quantified in this Impact Assessment.

Annex F: Alternative Redress Mechanism Options Considered

Option A: Retain existing investigative body with a separate review mechanism, an independently-appointed review board.

- F.1. This option builds on the existing expertise built up since 2005 when the current PSI Regulations came into force and attempts to avoid the costs associated with court action.
- F.2. The first stage would be for the complainant to raise the complaint through the public sector body's own complaints process. If, having gone through that process, the complainant is dissatisfied with the outcome they may refer the matter to OPSI.
- F.3. Without prejudice to the ability to formally complain, the parties could participate in OPSI's non-statutory mediation process at this point.
- F.4. On receipt of a formal complaint, OPSI would collect evidence from both the complainant and the public sector body and make a recommendation as to whether the public sector body had complied with the implementing legislation.
- F.5. OPSI would publish its conclusions and would set out a course of action for remedying any non-compliance. OPSI's recommendation would be non-binding. Should a public sector body or the complainant not accept OPSI's recommendation, it would be able to refer the matter to a review body whose decision would be legally binding. A candidate for discharging this review function is APPSI.
- F.6. APPSI, as an existing advisory NDPB and building on its complaint handling function and the Chair's ability to convene a special Review Board, would be given the power to make a binding decision. It is proposed that the Review Board would decide whether to accept OPSI's recommendation or to substitute OPSI's recommendation with its own decision. The status and constitution of APPSI as a non-departmental public body (NDPB) will need to be reconsidered in order to support this power.
- F.7. APPSI's role in the process would satisfy the need for an impartial review body with appropriate expertise. The option of referral to an expert review board such as the APPSI Review Board would manage any perceived potential conflict between OPSI as a complaint investigator and TNA as the policy lead for the re-use of public sector information.
- F.8. The ability to make binding decisions being defined in the Regulations would be sufficient to meet the requirements of the amending Directive and would not necessitate the setting up of a statutory enforcement mechanism.
- F.9. While this option meets the test of what will be required to meet the minimum requirements of the amended amending Directive, it is a non-judicial option in that in that there is no formal escalation process to a tribunal or a court. It may, however, be possible for either party to seek a judicial review of the Review Board's decision. Public sector bodies could seek judicial review of APPSI's decision but this would be subject to whether the reconstituted APPSI has Crown status in which case if the public sector body has Crown status itself it would not be able to judicially review the APPSI Review Board's decision.

It is also recognised that the current redress mechanism was not designed to accommodate the new requirements of the amended Directive and therefore some stakeholders may query whether the proposed modifications to the existing model would be fit for purpose. For this reason there is no appetite for going down this path.

Stage	Stage Description	Redress Mechanism
0	Public Sector Body	
1	Third party investigator	Office of Public Sector Information
2	Impartial review body	Independently-appointed Review Board – Binding Decision

Option B: Transfer the dispute resolution role to a body which has similar regulatory responsibilities, likely to include a tribunal process

- F.10. A third implementation option would involve transferring the dispute resolution role to another existing body. Three possible candidates are the Competition and Markets Authority (CMA), the Information Commissioner's Office (ICO) and the Office of the Information Commissioner for Scotland.
- F.11. The CMA has indicated that maintaining the existing model whereby it is consulted on re-use complaints which relate to competition, working in support of the re-use regulator, would be preferable. It would also be consistent with its administrative priorities.
- F.12. This option examines the possibility of the role being undertaken by the ICO.
- F.13. The ICO has regulatory responsibility for access to information held in the public sector and for data protection. It also has a role concerning the re-use of datasets, although this role is restricted in scope and it has not received any formal complaints to date under this heading which has been in force since September 2013. It should be noted that the datasets provisions do not extend to Scotland. TNA has a working agreement with the ICO which includes co-operation on complaint handling.
- F.14. Under this option, a re-user would complain to the public sector body in the first instance and then to the ICO.
- F.15. The ICO satisfies the requirement that the review body should be impartial. Under this option the ICO's decision would be legally binding. However, its decision could be appealed to the First-tier Tribunal (Information Rights). The Tribunal can uphold the ICO's decision or substitute its own.
- F.16. The ICO's portfolio of activities may expand in the near future. Any proposal to transfer the re-use function would need to be considered in the context of the organisation's, possibly reduced, capacity to absorb further duties.
- F.17. While the ICO and the Tribunal have some UK-wide powers, it may be appropriate to consider routing complaints relating to Scottish public sector bodies through the Scottish Information Commissioner's Office.
- F.18. On balance, however, it is considered that there would be little point in expanding the ICO's role in this way when there is already a body in existence in the form of OPSI which has the requisite experience and track record in the field of PSI.

Stage	Stage Description	Redress Mechanism
0	Public Sector Body	
1	Impartial review body	Information Commissioner's Office – Binding Decision
2	Appeal mechanism	First-tier Tribunal (Information Rights) and subsequent higher tribunals and courts

Option C: Direct recourse to the courts

- F.19. This option would entail complainants seeking redress directly from the courts system should they be dissatisfied with the response to the complaint made by the public sector body itself.
- F.20. This approach to transposing the amending Directive is being considered in a number of member states although we have yet to be advised on the detail of their proposals. This option would likely be perceived as a retrograde step for the UK. Under the 2005 Regulations, the OPSI/APPSI compliant handling process was devised as a means of avoiding potentially long and expensive action through the courts.
- F.21. It is possible that the complainant could take an action for breach of statutory duty by the public sector body or seek judicial review of the public sector body's actions. While judicial review remains option it will need to take into account developing jurisprudence. However, if that was the only route open to them it is unlikely that the redress mechanism could be considered "swift", as required by the amending Directive.
- F.22. When the original PSI Directive was being transposed the option of providing direct recourse to the courts was discounted in favour of providing a low cost and proportionate alternative. It was felt that small and medium enterprises would not have the financial resources or the inclination to pursue complaints through the courts. These arguments still apply and for that reason this option is not seen as being a suitable option.

Stage	Stage Description	Redress Mechanism
0	Public Sector Body	
1	Impartial Review Body	Court of first instance – Binding Decision
2	Appeal mechanism	Higher courts