

Title: Implementing the Revised EU Electronic Communications Framework – Authorisation Directive Lead department or agency: Department for Culture, Media and Sport Other departments or agencies: Ofcom	Impact Assessment (IA)
	IA No: DCMS022
	Date: 04/03/2011
	Stage: Final
	Source of intervention: EU
	Type of measure: Secondary legislation
Contact for enquiries: Stephen Fernando (020 7215 6320)	

Summary: Intervention and Options

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

In order to address the market failures that exist in the electronic communications market it is important that communication providers comply with a set of obligations that ensures the market functions effectively and works well for consumers. Such obligations will require the provider to take a number of measures (for example maintaining the functioning of a network or ensuring that customers are offered contracts with minimum terms). Amendments to the Authorisation Directive strengthen Ofcom's enforcement powers in order to reduce the level consumer detriment in the market. It also harmonises the European market by limiting regulation to the minimum that is strictly necessary and ensuring a consistent approach to regulation across Europe, thus further developing an internal market.

What are the policy objectives and the intended effects?

The overall objective of the Authorisation Directive is aligned with the general aim of promoting competition, investment and innovation in electronic communications, so that user needs are met and consumer interests are protected. The specific aims within this overall objective are:

- promote more efficient and flexible spectrum management
- increase the consistency of regulatory actions, in line with the wider objective of creating a single e-communications market in Europe
- reinforce user rights and consumer protection

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

The Government is required to implement a number of changes within the Directive that allow for no flexibility in implementation. These include a requirement to strengthen Ofcom's enforcement capabilities and a power to enable Ofcom to request information on spectrum-related functions. These are assessed against a counterfactual 'no change' scenario, without looking at other discrete options. In one area where the UK may have some flexibility in implementation, two options are analysed. The revised Directive requires that Ofcom be allowed to impose dissuasive financial penalties when firms are not compliant with their obligations. With regards to firms that do not comply with Ofcom information requests, Government consulted on increasing the maximum penalty that Ofcom can impose to £2 million. The alternative is to have it remain at its current level of £50,000. Government's preferred option is to increase the maximum penalty to deter firms from breaching their obligations to provide information, as many are not compliant.

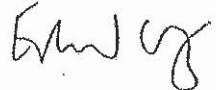
Will the policy be reviewed? It will be reviewed. If applicable, set review date: 5/2016

What is the basis for this review? Duty to review. If applicable, set sunset clause date: Month/Year

Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes
--	-----

SELECT SIGNATORY Sign-off For final proposal stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister:  Date: 24/03/2011

Description:

Implementation of the Authorisation Directive - articles for which there are no options in implementation

Price Base Year 2011	PV Base Year 2011	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low:	High:	Best Estimate: -0.69

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	N/A		
High			
Best Estimate		0	0.08

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

Ofcom will have a new information gathering power for its spectrum-related functions. In order to respond to information requests, firms are expected to incur a cost of around £78,000 per year. Additional costs to Ofcom are expected to be negligible.

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

Ofcom's enforcement powers will be strengthened as a result of changes to the legislation. It is not possible to estimate the costs as Ofcom will need to consult on a revised set of enforcement guidelines. For example penalties can be issued retroactively and Ofcom can order the cessation of a network or service where there are serious or repeated breaches of a firm's conditions. However, if firms are fully compliant with their obligations then the economic costs will be negligible.

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

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

In the event that Ofcom's enhanced enforcement powers lead to fewer communication providers breaching their obligations, it is possible that the legislation will reduce the amount of consumer detriment in the market. This annual detriment has been valued at around £4.2 million, thus a 10 per cent reduction would benefit consumers by almost half a million pounds per year. However, it is not possible at this stage to robustly estimate the potential impact of strengthened enforcement.

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

Strengthening Ofcom's information gathering powers for spectrum matters could allow the regulator to investigate potential breaches of regulatory obligations more effectively, reducing the consumer harm such breaches cause. Whilst it is not possible to quantify this, an example of one of the key benefits is that Ofcom will have better information to prevent illegal broadcasting. It is estimated that this currently affects radio quality for 2 million adults on a weekly basis.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

Ofcom will consult a revised set of enforcement guidelines, which will set out the detailed implementation of the EU legislative changes. Following changes to the Annex of the Directive (Part C), Government will give Ofcom new powers to adopt tariff principles or to set tariff caps in relation to certain numbers of number ranges. Before Ofcom exercise this power, they will be required to consult and to produce an impact assessment on their proposal.

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: 0.08	Benefits: 0	Net: -0.08	No	NA

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?		United Kingdom			
From what date will the policy be implemented?		25/05/2011			
Which organisation(s) will enforce the policy?		Ofcom			
What is the annual change in enforcement cost (£m)?		0			
Does enforcement comply with Hampton principles?		Yes			
Does implementation go beyond minimum EU requirements?		No			
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: N/A	Non-traded: N/A		
Does the proposal have an impact on competition?		Yes			
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?		Costs:		Benefits:	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties¹ Statutory Equality Duties Impact Test guidance	Yes	19
Economic impacts		
Competition Competition Assessment Impact Test guidance	Yes	19
Small firms Small Firms Impact Test guidance	No	
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development Sustainable Development Impact Test guidance	No	

¹ Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Description:

Preferred implementation of the Authorisation Directive - articles for which there are options in implementation

Price Base Year 2011	PV Base Year 2011	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low:	High:	Best Estimate: 0
COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)	
Low	N/A				
High					
Best Estimate			0		0
<p>Description and scale of key monetised costs by 'main affected groups'</p> <p>DCMS intends to increase the maximum penalty that Ofcom can impose on firms that do not comply with the regulator's information requests, from £50,000 to £2 million. This will only increase costs for firms that are not compliant with their obligations but it is not considered to be a regulatory cost to business because firms should be compliant with their legal obligations.</p>					
<p>Other key non-monetised costs by 'main affected groups'</p>					
BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)	
Low	N/A				
High					
Best Estimate			0	Unquantifiable	Unquantifiable
<p>Description and scale of key monetised benefits by 'main affected groups'</p> <p>Not all communication providers are compliant with their obligations to provide Ofcom with information when requested and many have required enforcement action on more than one occasion. This indicates that the current maximum penalty is not dissuasive, meaning that Ofcom cannot fully enforce firms to comply with their obligations. It is not possible at this stage to robustly estimate the potential impact of strengthened enforcement but any deterrent effect will result in a net benefit as the economic cost is zero.</p>					
<p>Other key non-monetised benefits by 'main affected groups'</p> <p>Ofcom should have access to better and more timely information to monitor the market and (if necessary) enforce firms' obligations. Investigations should also be resolved more quickly and efficiently on the basis of reliable information.</p>					
<p>Key assumptions/sensitivities/risks</p> <p>Some communication providers are concerned that increasing the penalty to £2 million is disproportionate. However, this should be mitigated by Ofcom's legal obligation to ensure that any sanction is proportionate (bearing in mind that £2 million is only a maximum). Furthermore, it is possible that keeping the current at maximum at £50,000 will not be compliant with EU legislation, which requires penalty powers to be 'dissuasive'.</p>				Discount rate (%)	3.5
<p>Direct impact on business (Equivalent Annual) £m):</p> <p>Costs: 0 Benefits: 0 Net: 0</p>			In scope of OIOO?	Measure qualifies as	
			No	NA	

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?		United Kingdom			
From what date will the policy be implemented?		25/05/2011			
Which organisation(s) will enforce the policy?		Ofcom			
What is the annual change in enforcement cost (£m)?		0			
Does enforcement comply with Hampton principles?		Yes			
Does implementation go beyond minimum EU requirements?		No			
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: N/A		Non-traded: N/A	
Does the proposal have an impact on competition?		No			
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?		Costs:		Benefits:	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties¹ Statutory Equality Duties Impact Test guidance	Yes	19
Economic impacts		
Competition Competition Assessment Impact Test guidance	No	
Small firms Small Firms Impact Test guidance	No	
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development Sustainable Development Impact Test guidance	No	

¹ Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	Government consultation http://www.bis.gov.uk/Consultations/revised-eu-electronic-communications-framework
2	EC Legislative proposals and impact assessment http://ec.europa.eu/information_society/policy/ecommlibrary/proposals/index_en.htm
3	Full European Legislation http://ec.europa.eu/information_society/policy/ecommlibrary/regframeforec_dec2009.pdf
4	Communications Act 2003 http://www.legislation.gov.uk/ukpga/2003/21/contents
5	Wireless Telegraphy Act 2006 http://www.legislation.gov.uk/ukpga/2006/36/contents

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs	0	0	0	0	0	0	0	0	0	0
Annual recurring cost	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Total annual costs	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Transition benefits	0	0	0	0	0	0	0	0	0	0
Annual recurring benefits	0	0	0	0	0	0	0	0	0	0
Total annual benefits	0	0	0	0	0	0	0	0	0	0

* For non-monetised benefits please see summary pages and main evidence base section

Evidence Base (for summary sheets)

Background

1. The provisions of the Authorisation Directive cover authorisations of all electronic communications networks and services. The aim of the legislation is to establish a harmonised market for electronic communications networks and services, by limiting regulation to the minimum that is strictly necessary. This was done in the original Directive by mandating the replacement of individual licenses with 'general authorisations'. Under a license regime, a firm is required to apply for a licence before being able to operate and supply networks or services to consumers, with each licence setting out the obligations of the company. However, under an authorisation regime, communication providers do not need to apply for a licence in advance. They are free to start providing an electronic communications network or service so long as they comply with the relevant conditions attached to the general authorisation. Ofcom's general authorisation regime includes 'General Conditions of Entitlement' (i.e. conditions which apply to most communications providers) and 'specific conditions' (conditions which apply to particular companies depending on their circumstances – for example universal service conditions only apply to the universal service providers)¹.
2. Under the Authorisation Directive, the general authorisation gives undertakings the right to provide electronic communications networks and services and to negotiate interconnection with other providers in the European Community. When such networks and services are provided to the public, a general authorisation makes them eligible to be designated to provide certain universal service functions.
3. Member States are also required to facilitate the use of radio frequencies through general authorisations but it remains possible to subject the use of some frequencies to the grant of individual rights, if such use: avoids harmful interference; ensures technical quality of service; safeguards the efficient use of spectrum; ensures the fulfilment of other general interest objectives defined by Member States.
4. The national regulatory authority is responsible for monitoring and supervising compliance with the requirements of the general authorisation or the rights of use and specific obligations. Where an undertaking does not comply with one or more of these conditions, the NRA must give it a reasonable opportunity to state its views within a reasonable period. Member States must also empower the NRA to impose orders to cease the provision of services in certain circumstances or financial penalties. In the case of serious or repeated breaches, the NRA can prevent an undertaking from continuing to provide electronic communications networks or services or suspend or withdraw rights of use.

Rationale for Government Intervention

5. In order to address the market failures that exist in the electronic communications market – for example natural monopoly and consumer detriment – it is important for network operators and service providers to comply with a set of obligations that ensures the market functions effectively and works well for consumers. Such obligations require the communications provider to take a number of measures, for example maintaining the functioning of a network, negotiating interconnection with another provider, providing uninterrupted access to emergency organisations, ensuring that customers are offered contracts with minimum terms, ensuring that customers are provided with clear and up-to-date information on prices and terms and conditions and so on.² Under the EU Framework and, specifically the Authorisation Directive, such obligations are enforced through the authorisation regime outlined above.
6. However, it is also important that such rules and obligations are made as simple as possible – such that communication networks and services are easier to provide - and also are consistent across Europe, with the latter facilitating the internal market for electronic communications networks and services. Differences between Member States can act as barriers that prevent other operators from

¹ For further details, see <http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/?a=0>

² For further details on communication providers' obligations, please refer to <http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/general-conditions/>

starting up or doing business across different Member States. Therefore the Authorisation Directive seeks to establish a harmonised market by limiting regulation to the minimum that is strictly necessary and ensuring a consistent approach to authorisations across Europe.

Policy Objectives

7. The overall objective of the Authorisation Directive is aligned with the general aim of promoting competition, investment and innovation in electronic communications, so that user needs are met and consumer interests are protected. The specific aims within this overall objective are:
 - promote more efficient and flexible spectrum management
 - increase the consistency of regulatory actions, in line with the wider objective of creating a single e-communications market in Europe
 - reinforce user rights and consumer protection

Options Analysis

8. The revised Authorisation Directive introduces a number of new articles and amendments to existing legislation that covers a wide range of issues in the electronic communications market. Some of these articles require significant changes to the UK regulatory regime, whilst others do not. The focus of this impact assessment is on the former. In determining which legislative amendments are 'significant', and therefore warrant assessment, DCMS has been guided by the topics covered in the Government consultation document and regulatory changes that were raised in a number of consultation responses as having a significant consequence.
9. Significant changes to the legislation have also been separated into two categories. The first group of legislative changes are articles that have no provision for leeway in implementation (category 1), whilst the second group can be implemented in more than one manner (category 2). In so far as it is possible, estimates of the costs and benefits of all articles under both categories have been made. However, for category 1, it is not possible to identify discrete 'options' for implementation, therefore they are assessed against a baseline 'no change' scenario without looking at alternatives. For articles that fall under category 2, however, a number of options are appraised. The impact of the two categories are considered and assessed separately

Category 1 – changes to existing regime; no options available

Article 10 – Compliance with the conditions of the general authorisations or of rights of use with specific obligations

10. This article sets out the enforcement powers of NRAs to ensure that communications providers comply with the obligations set out in the general authorisation and the specific obligations. The revised Authorisation Directive makes a number of operational changes to some of these powers, which are likely to have a significant impact in the UK.

Current Enforcement and Compliance

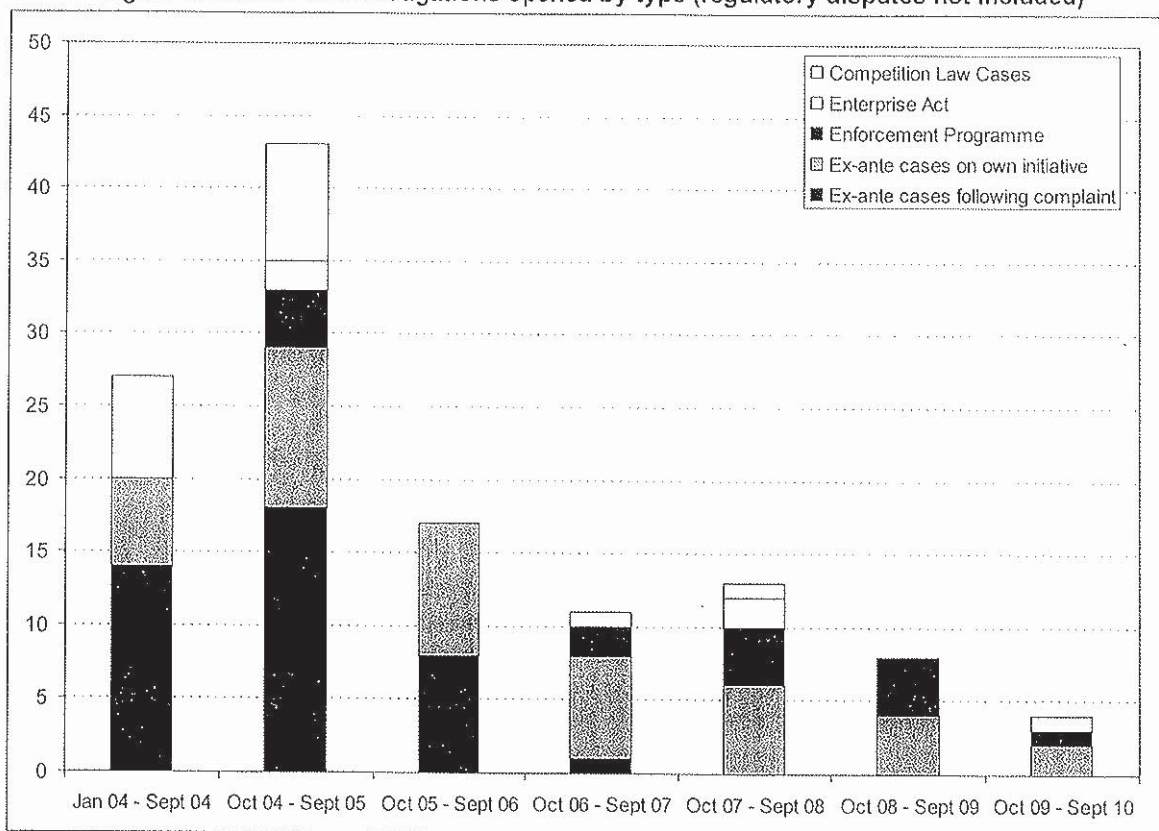
11. Ofcom currently takes enforcement action across a number of industry sectors and is able to use a range of statutory powers granted by various acts (including the Communications Act 2003, the Competition Act 1998, the Enterprise Act 2002, the Broadcasting Act 1990, the Broadcasting Act 1996, EU Regulations and the Wireless Telegraphy Act 2006). Ofcom takes enforcement action to – among other things - encourage competition, enforce consumer protection law and encourage regulatory compliance. It also maintains a set of principles, which include commitments to: operate with a bias against intervention (but with a willingness to intervene firmly, promptly and effectively where required); ensure that interventions are evidence-based, proportionate, consistent, accountable and transparent; always seek the least intrusive regulatory mechanisms to achieve Ofcom's policy objectives.
12. With regards to telecommunication issues specifically, Ofcom has responsibilities to enforce *ex ante* rules (e.g. in the conditions that it sets under the Communications Act 2003), competition law (under the Competition Act 1998 and the Enterprise Act 2002) and wider consumer protection laws

(including unfair terms in consumer contracts). Competition issues are usually investigated in response to information brought by companies whilst consumer issues are either investigated on the basis of complaints received, Ofcom's own initiative (using data collected by its Central Operations team) or information from external sources such as Consumer Direct. The regulator has a range of remedies available to correct the behaviour of operators and service providers, including:

- issuing notifications of contravention
- issuing a notification of misuse (of an electronic communications network or service)
- securing formal undertakings from companies that they will change their offending behaviour in order to become compliant with consumer law
- seeking an injunction or order from the courts to enforce consumer protection

13. With regards to the issuing of notifications, if they do not result in the communications provider correcting its behaviour then Ofcom may follow it up by an enforcement notification and/or the imposition of a penalty of up to ten per cent of relevant turnover. Figure 1 below shows the number and types of formal investigations that Ofcom has opened since 2004, whilst Figure 2 shows the outcome of all investigations between December 2003 and September 2010. The latter shows that around one in five investigations led to a notification, whilst one third successfully resulted in the target company changing its behaviour. In addition to such formal investigations, Ofcom will often redirect enquiries from consumers of firms or deal with it by informal action. For example, out of 41 complaints received in the period April – September 2010 (including dispute resolutions), only 8 were accepted to investigation. Others were either rejected (for example because they did not comply with Ofcom guidelines), redirected, are ongoing or were dealt with by information action. In the six months before April 2010, 12 investigations were opened as a result of 35 complaints³.

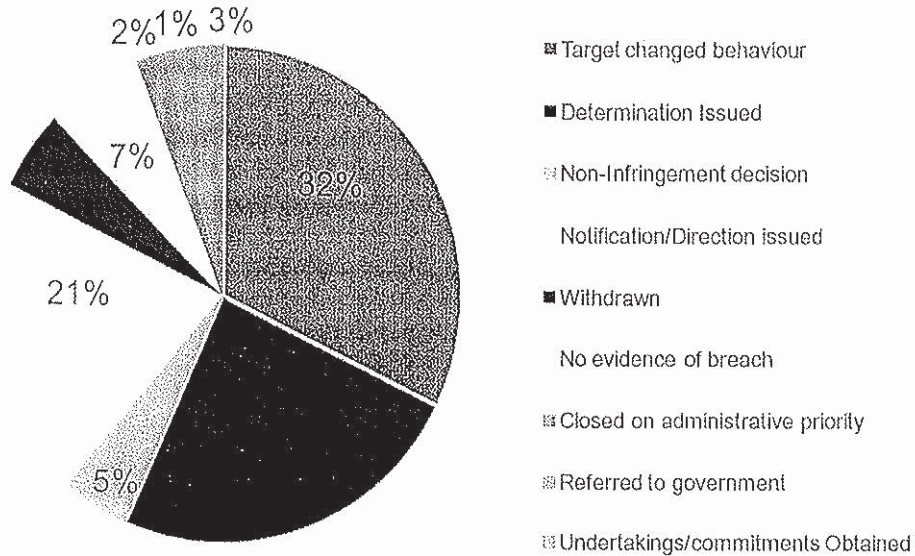
Figure 1: Number of investigations opened by type (regulatory disputes not included)



Source: Ofcom's Investigations Activity: Report on activity between 1 April and 30 September 2010 (November 2010)

³ Source: Ofcom's Investigations Activity – Six Monthly Round-up of Complaints and Disputes

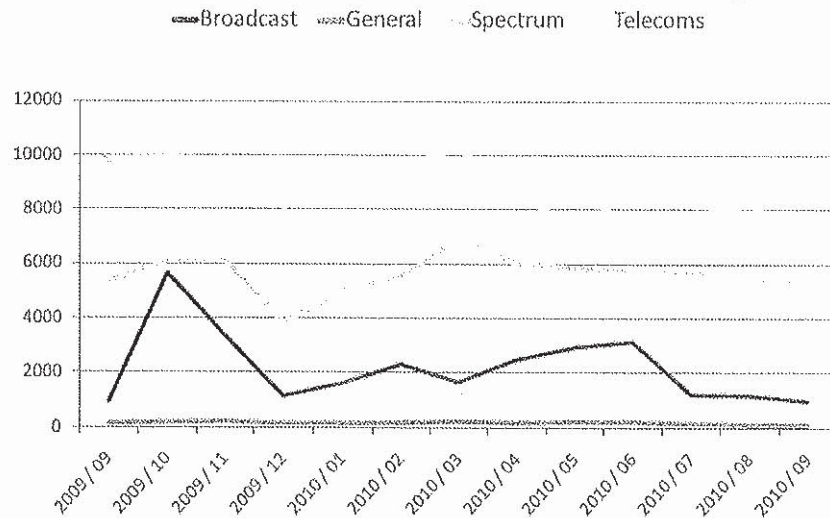
Figure 2: Outcome of Investigations (includes regulatory disputes)



Source: Ofcom's Investigations Activity: Report on activity between 1 April and 30 September 2010 (November 2010). Note that these investigations include regulatory disputes between communication providers (where determination will be particularly relevant). Total number of investigations during the period between December 2003 and September 2010 was 176.

14. Evidence currently suggests that Ofcom's enforcement regime works reasonably well. A survey undertaken amongst Ofcom's stakeholders (principally from industry) received 38 responses⁴. Whilst this is not large enough to provide a robust analysis, the results indicated that the majority (61 per cent) were favourable towards Ofcom whilst half said that its enforcement policies are better than average. The vast majority – around 80 per cent – also believed that Ofcom investigations are conducted fairly.
15. Nevertheless, there are a number of areas where enforcement needs strengthening. The number of telecommunications-related complaints in Figures 3 and 4 below suggests that firms operating in the UK are not fully compliant with their obligations; the overall number of complaints has remained relatively stable at around 20,000 per month, with around half of these being about telecoms (see Figure 3). The biggest telecoms complaints such as mis-selling and complaints handling showed a general increase in the 14 month period to September 2010 (see Figure 4).

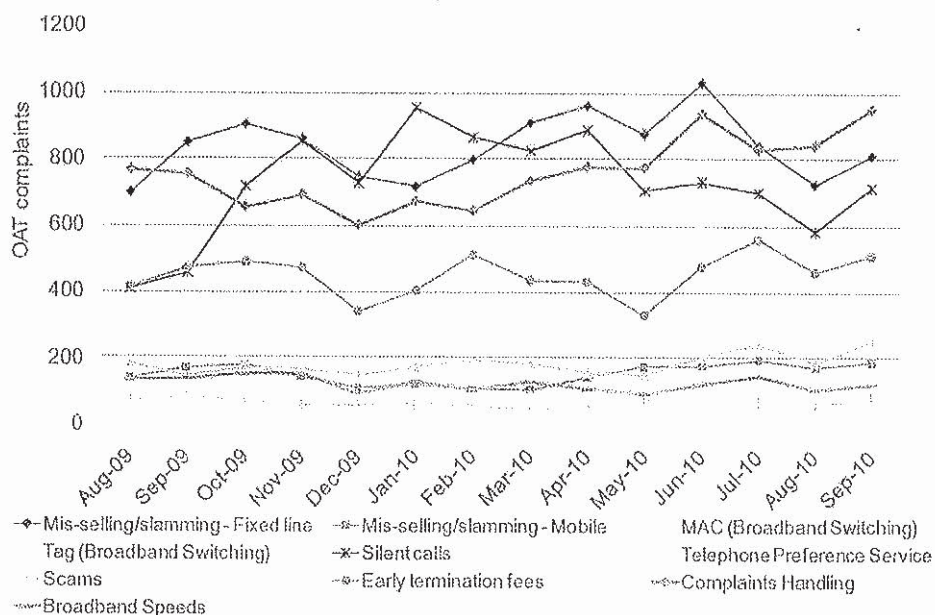
Figure 3: Number of complaints received by Ofcom: 2009-10, by month



Source: Ofcom, Ofcom's Advisory Team (OAT) Data. "General" enquiries could relate to broadcast, spectrum or telecoms issues.

⁴ Ofcom, 'Enforcement Report: A report on Ofcom's approach to enforcement and recent activity' (May 2009). Survey carried out in December 2008.

Figure 4: Trend in complaints about telecoms issues



Source: Ofcom, Ofcom's Advisory Team (OAT) (Telecoms Complaints Data⁵)

16. Such breaches of obligations and conditions can cause consumer detriment in the form of anxiety and distress, as well as having potential financial implications. It is extremely difficult to accurately quantify the amount of consumer detriment that the above problems cause but it is possible to approximate by using a study by the Office of Fair Trading, which assessed the economy-wide impact of consumer problems with goods and services⁶. The study estimated that the overall value of revealed consumer detriment in the UK economy over one year was £6.6 billion. Across a number of sectors, telecoms was one of the most complained about goods/services and the average value of financial loss due to a telecommunications problem was given to be £42 (which is significantly less than losses incurred from problems in other sectors, such as £1,033 for insurance and £533 for home maintenance). If one multiplies this by the number of complaints in the year to September 2010 (about 100,000 - see Figure 1 above) then this suggests a detriment of around £4.2 million per year. This only includes detriment associated with financial loss and does not take into account emotional distress or the cost of time to deal with the complaint; furthermore, it is likely that a number of consumers have problems that they do not complain about, which are therefore not captured in the figure above. On the other hand, some of the reported complaints may be without merit. Therefore, the estimate should provide a useful proxy of consumer detriment.
17. The calculation above is not intended to provide a robust estimate of the level of consumer detriment in the telecommunications sector as such a figure would require a more detailed consumer survey and analysis. However, it suggests the current cost of communication providers failing to comply with their obligations results in a level of consumer detriment that is of an order of magnitude of millions of pounds per year. The OFT study also found that only one half of telecommunications problems are completely resolved.
18. It should be noted that it is not the role of Ofcom to resolve individual consumer complaints; where there are problems with a customer's communications provider, complaints are referred to two adjudication schemes (Otelco and CISAS) and/or to Consumer Direct. However, Ofcom does have a role to tackle issues of widespread concern and where there is a pattern of bad behaviour, or if the level of consumer harm is significant to warrant Ofcom action. The evidence above suggests that

⁵ Mis-selling occurs in instances when consumers are given incorrect or misleading information by communication providers (for example to encourage them to switch). 'Slamming' refers to consumers receiving a bill from a company they haven't signed up to (i.e. the new company has switched their account without first obtaining their permission). Silent calls are usually the result of predictive diallers used by various firms (e.g. telemarketing, market research, debt collection etc.) calling a consumer but not having an available agent to speak when the customer answers the phone - therefore, the customer only hears silence. 'Tags' refer to 'tags on the line' which prevent consumers who have just bought broadband for the first time (or have just moved into a new property) from using the internet; they occur for a variety of reasons and in the majority of cases the provider is best placed to fix the underlying cause of the Tag. Lastly, a 'MAC' is a code that enables a consumer to switch from one broadband provider to another with minimal disruption to their service; such codes should be given to a consumer by their current provider within five working days of a request.

⁶ OFT, 'Consumer Detriment: Assessing the frequency and impact of consumer problems with goods and services' (April 2008)

there remains a problem in relation to electronic communications. Furthermore, the aforementioned stakeholder survey showed only half of respondents thought that Ofcom's interventions act as a deterrent against breaking compliance rules, whilst a significant minority – 20 per cent – stated that Ofcom's interventions did not reduce harm in the market⁷.

Regulatory amendments

19. As discussed above, Ofcom currently has a number of tools at its disposal to enforce regulations and conditions and impose sanctions when they are breached (with any sanction needing to be appropriate and proportionate to the harm, damage and distress caused). However, amendments to Article 10 of the Authorisation Directive make a number of changes to the enforcement powers granted to Ofcom to enable it to deal more effectively with breaches of regulatory obligations. These changes could be relevant in addressing the detriment that currently exists in the market.
20. Article 10(2) has been amended so that instead of the need to notify an undertaking of an alleged breach and giving it one month either to state its views or to remedy the breach, the NRA now just has to allow a 'reasonable time limit' for the undertaking to state its views – thus the requirement to give the undertaking an opportunity to remedy the breach before issuing a penalty has been removed.
21. Ofcom's powers under Article 10(3) have also been strengthened so that it has a power to require the cessation of the breach either immediately or within a reasonable time limit. To this end, the revised Directive also allows penalties to be periodic and to have retroactive effect. The latter confirms that Ofcom will be able to issue a financial penalty that dates back to the start of the contravention, rather than just the date of the first notification. Once a breach has been established, Ofcom will also be able to issue periodic penalties going forward (for example a daily penalty for each day that the contravention continues).
22. Further enforcement powers are granted under Article 10(5), where NRAs can impose sanctions and penalties for a breach of obligations even if the breach has already been remedied. Changes to the legislation also allow Ofcom to prevent undertakings from continuing to provide a network or service (or suspend or withdraw its rights of use) where there are serious or repeated breaches of the firm's conditions; this is different to the current legislation which gives this power where there are serious and repeated breaches.
23. Lastly, changes to Article 10(6) - which currently allows the NRA to take interim measures where a breach of conditions poses a threat to public safety/security/health or creates serious economic or operational problems for other providers or users of communications networks or services (or radio spectrum) – make clear such interim measures are only valid for 3 months. They can be extended for a further period of 3 months if the enforcement process has not been completed.

Costs

24. The above legislative changes will be made by amending relevant sections of the Communications Act 2003 and the Wireless Telegraphy Act 2006. As their enforcement powers have been strengthened, Ofcom will consult this summer on revising its enforcement guidelines to reflect the changes at the European level (for example in determining what a 'reasonable time limit' is in the circumstances for a communications provider to respond to an Ofcom notification). Without knowing the details of how enforcement will be revised, it is not possible to estimate the costs of such changes, though these will be analysed by Ofcom as they update their guidelines. However, it is worth noting that any direct cost on businesses ultimately depends on their compliance with the obligations set out in the General and specific conditions. Therefore, if they are fully compliant then the economic costs of changing Article 10 will be negligible.
25. In terms of enforcement costs to the regulator, again this will largely be determined by the details of the guidance that Ofcom will issue. However, it is likely that any cost increase will be negligible in the context of Ofcom's existing enforcement framework, which should be able to exercise the new powers (if necessary) without any additional burden.

⁷ Ofcom, 'Enforcement Report: A report on Ofcom's approach to enforcement and recent activity' (May 2009).

Benefits

26. In the event that Ofcom's enhanced enforcement powers provide a greater deterrent for communication providers in breaching their obligations and conditions, it is possible that changes to Article 10 could lead to lower levels of consumer detriment in the market. Such benefits are not insignificant; for example if the amount of detriment falls by 10 per cent then users of telecommunication services could benefit by around £420,000 per year (based on the calculation estimated above). However, as with the costs above it is not possible to produce a robust quantification of benefits until Ofcom consults on the changes it intends to make.
27. It is also important to note the wider European context of making obligations and compliance with them more consistent. There are significant differences in this regard, for example the most recent ECTA scorecard assessed how effective NRAs were in enforcing the obligations of providers that have SMP. Whilst the UK has demonstrated that it has a track record of actively pursuing SMP violations (thus receiving the maximum score), four EU countries – including France and Germany – received the lowest score⁸. Therefore, if changes to the Authorisation Directive improve the level of regulatory compliance in other European countries, UK communication providers may have better incentives to export their services.

Risks and Assumptions

28. A number of consultation responses highlighted a series of risks that may result from the changes to Article 10 of the Authorisation Directive. Many of the amendments allow Ofcom to use its extended powers on a subjective basis; for example, defining a 'reasonable time limit' it moves away from an objective limit (e.g. a fixed one month period). Aside from the regulatory uncertainty this creates, it also has the potential to increase the number of appeals by network operators and service providers.
29. It was also argued that given the fast-moving nature of the communications industry, a number of providers may engage in certain innovative activities that – whilst intended to benefit customers – are negatively perceived. In these cases, it is important that providers are given the opportunity to adapt without the risk of a penalty or sanction; otherwise, certain innovations (be they product or process) may be stifled.
30. The above risks will be mitigated by Ofcom consulting on its new powers and, following on from that, the issuance of guidelines that give communication providers the regulatory certainty that they require. This will also avoid a necessary increase in appeals as Ofcom decisions will be justified on a standard set of guidelines. Furthermore, when Ofcom do take enforcement action in a particular case, they need to give the company concerned the opportunity to make representations first (except in urgent cases, though even in the latter Ofcom is required to provide the company with an opportunity to make representations after taking action).

Article 10 (1) – Information Gathering and Spectrum

31. Article 10(1) of the Authorisation Directive requires NRAs to monitor and supervise compliance with the conditions of general authorisation or of rights of use. In this regard, it has a power to require providers to provide all information necessary to verify compliance with its obligations. Section 135 of the Communications Act 2003 already gives Ofcom wide information gathering powers to require the collection of such information. However, whilst that power is wide (see impact assessment for the Framework Directive for further details), it does not extend to various matters relating to spectrum. Section 32 of the Wireless Telegraphy Act 2006 (WTA) contains an information gathering power but one that only enables Ofcom to require information to be provided for statistical powers.
32. Ofcom's power to request information under a licence is limited and does not adequately reflect what will soon be required by the Authorisation Directive; specifically that the powers for spectrum should be the same as for telecoms to enable Ofcom to carry out its duties in these areas. Therefore, in order to ensure that the UK is fully compliant, a new information gathering power will be introduced into the WTA to enable Ofcom to request information for the purpose of fulfilling its spectrum-related functions, such as ascertaining whether a contravention of a licence condition is occurring or has occurred, or for the purpose of exercising their general spectrum management functions.

⁸ ECTA Regulatory Scorecard 2009.

Costs

33. The new WTA information gathering power will be enforced in much the same way as section 135 of the Communications Act 2003. Government did not receive any evidence during the consultation to indicate the likely costs this would impose on communication providers that use spectrum. Therefore, in order to estimate the cost of this new burden, it is assumed that they will be similar to the burdens currently incurred by communication providers as a result of Section 135 of the Communications Act, which is £78,000 per year⁹.

Benefits

34. As discussed in the impact assessment for the Framework Directive, the benefits of information provision and reporting obligations are difficult to quantify. However, a regime that facilitates reporting obligations can provide a number of benefits. Spectrum enforcement seeks to address two principal causes of spectrum interference, namely illegal broadcasting (e.g. pirate radio) and the placing on the market of 'illegal' (non-compliant) equipment. By enhancing Ofcom's information gathering powers, it will be in a better position to investigate suspected breaches of the legal framework.
35. Illegal broadcasting and the sale and use of illegal equipment can cause significant harm, including interference caused to legitimate radio stations (which deprives them of audience and reduces revenue from advertisers, thus causing serious harm to their business and resulting in consumers not being able to listen to the station of their choice) and signals from illegal broadcasters interfering with the radio systems of emergency services or the National Air Traffic Service. The fact that there are around 6,000 spectrum complaints every month (see Figure 3 above) shows that spectrum problems are persistent across the UK. Further evidence from a survey commissioned by Ofcom in 2007 also showed that almost one third (30 per cent) of all radio listeners across the UK suffer interference on FM, with 14% of these individuals believing it to be caused by illegal broadcasters. Based on current figures, this suggests that almost 2 million adults in the UK are affected by illegal broadcasting on a weekly basis¹⁰. Given that almost two thirds of listeners affected by radio interference said that they switch to a different station (or turn the radio off), there are clearly significant costs associated with illegal broadcasting. Furthermore, they are greater than the number of complaints would suggest, as only 2 per cent of listeners who experience radio interference saying that they complain about it¹¹.
36. Given the above evidence and the fact that in 2008 Ofcom undertook a number of illegal broadcasting activities (including 36 studio raids, 28 prosecutions, 14 formal cautions, 489 transmitter seizures and 74 written warnings¹²), the size of the problem is likely to be of a much larger scale than the costs outlined above. Unfortunately, it is not possible to estimate the extent to which Ofcom's enhanced information gathering power will reduce the current levels of harm incurred and, therefore, the benefits of changing Article 10(1).

Article 14 – Amendments of rights and obligations

37. This article has been revised such that minor amendments to rights, conditions and procedures concerning general authorisations and rights of use can be agreed with a communications provider without holding a public consultation. Given that such amendments are by definition minor with minimal impact, it is unlikely that this will have a significant impact, though industry should benefit by changes being implemented more quickly and without any burdens associated with a consultation.

Annex (Part C)

38. Paragraph 1 of Part C of the Annex to the Authorisation Directive has been amended to clarify that national regulatory authorities have the power to adopt tariff principles or to set tariff caps in relation to certain numbers or number ranges. This is intended to create greater transparency for consumers

⁹ Cost estimates are based on the Better Regulation Executive's Administrative Burdens <https://www.abcalculator.bis.gov.uk/index.php>

¹⁰ Evidence from Ofcom's 2010 Communications Market Report indicates that 46.8 million adults listen to the radio on a weekly basis. If 30% (14 million adults) are affected by interference and 14% of these are caused by illegal broadcastings, then it affects 1.97 million adults weekly.

¹¹ Ofcom, 'Illegal Broadcasting: Annex 3 Research into listener perceptions of radio interference' (April 2007)

¹² Ofcom, 'Enforcement Report: A report on Ofcom's approach to enforcement and recent activity' (May 2009). Survey carried out in December 2008.

calling – for example – non-geographic numbers and to help prevent consumers receiving bills with unexpectedly high call charges ('bill shock'). In order to transpose this change into UK legislation, the Communications Act will be amended such that Ofcom has this power; as it is discretionary, it is not possible to assess the costs and benefits without knowing how Ofcom will exercise the power. However, a more detailed analysis will be undertaken in the event that Ofcom decides to make use of it.

Category 2 – changes to existing regime; options available

Article 5 – Rights of use for radio frequencies and numbers

Article 7 – Procedure for limiting the number of rights of use for radio frequencies

39. Changes to the above two articles relate to the use and management of spectrum and so the impacts are assessed in Annex 1 of the Framework Directive, which covers the topic of spectrum in one complete analysis.

Articles 10 and 11: Information Gathering and Dissuasive Sanctions

40. Article 10(1) of the Authorisation Directive requires NRAs to monitor and supervise compliance with the conditions of general authorisation or of rights of use. In this regard, it has a power to require providers to provide all information necessary to verify compliance with the conditions of the general authorisation (or of rights of use or with specification obligations). This is in accordance with Article 11, which sets out the information that may be required by the regulator in order to ensure compliance with general authorisation (as well as for rights of use and for specific obligations).

41. Article 10(3) currently states that Member States may empower the relevant authorities to impose financial penalties where appropriate, in order to ensure compliance. However, under the revised Directive, the Article states that the regulatory shall be empowered to impose dissuasive financial penalties. This change also complements an amendment to the Framework Directive, specifically the addition of Article 21a, which states that:

"Member States shall lay down rules on penalties applicable to infringements of national provisions adopted pursuant to this Directive and the Specific Directives and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be appropriate, effective, proportionate and dissuasive"

42. Ofcom already has powers to impose financial sanctions. Under section 139 of the Communications Act 2003, Ofcom can impose a penalty of up to £50,000 for breaches of the information gathering power. It will do so if the provider has not responded to a notification request from Ofcom to provide specific information (which the regulator can issue under section 138).

43. Whilst the revised Directive calls for such sanctions to be "dissuasive", Ofcom has argued that a £50,000 penalty has not proven to be a sufficient deterrent during the past few years in relation to its information gathering powers. During the past six years, Ofcom has taken enforcement action on 11 occasions, with three providers requiring action on more than one occasion¹³. Furthermore, there have been a number of cases where communication providers have provided incorrect information or are late in providing the information requested. It was also argued by some communication providers, in their responses to the Government consultation, that a £50,000 is unlikely to be dissuasive to those operating short-term scams, where the potential gains can exceed the amount of the fine.

44. Under the current regime, if Ofcom is minded to take action against a provider who has failed to respond to an information request, the first step is to issue a notification (under section 138 of the Communications Act). This provides the firm with a minimum of 30 days to send the requested information (under section 139). If it fails to comply, Ofcom can then issue a penalty.

45. However, the regulator has argued that the current maximum fine is not sufficient to act as a deterrent to stop the above behaviour in the case of large communication providers, bearing in mind that such firms can generate annual revenues of billions of pounds. Therefore, Government consulted on the option of increasing the maximum penalty under Ofcom's information gathering

¹³ Source: Ofcom

power to £2 million; a similar change has recently been implemented for sanctions related to silent calls. An assessment of strengthening Ofcom's enforcement in this manner is provided below, in addition to the baseline 'do nothing' option.

Option 1 – do nothing

46. Under this option, the penalty for failing to comply with an information request from Ofcom would remain at £50,000.

Costs

47. In order to be dissuasive, the level of a fine must be high enough to prevent a communications provider from breaching its information obligations. Firms would find it rational to breach its conditions if this creates more money for the business than they will be fined or from being made compliant. So for example, if the potential profit from a breach is £150,000 and the maximum penalty is £50,000 then it may be rational for a company to breach the conditions and pay the fine if being compliant would not cover the opportunity cost of £100,000. Furthermore, if they believe that the risks of investigation and sanctions being imposed are low, then the risk-adjusted level of penalty will fall, making it more likely that the benefits of breaching outweigh the costs of the penalty. Therefore, for the level of fine to be dissuasive, it must be greater than any potential benefits that can be gained by breaching the conditions.
48. Whilst there is no evidence on the current benefits of communication providers breaching Ofcom information requests, that fact that it occurs and that a number of providers either delay or provide incorrect information suggests that the current penalty level does not provide a sufficient deterrent. One of the key reasons for Ofcom requesting information is to ensure that firms are compliant with their obligations. Failure to do so can lead to significant consumer detriment which, as outlined above, could be in the order of millions of pounds. Therefore under this option, Ofcom is likely to continue to have problems enforcing section 135, meaning that the broader issue of consumer harm will remain.
49. It is also worth noting the fact that a penalty of up to £50,000 can be reasonably small compared to the penalty available to Ofcom in cases where firms breach their conditions (as set out in the General Authorisation or specific obligations), which is ten per cent of relevant turnover. If firms are in breach of their obligations but do not file their accounts with Companies House - which is the case for some communication providers - it is not possible for Ofcom to know the firm's turnover. As a result, Ofcom is required to request the information under section 135, but in cases where a firm's turnover is greater than £500,000 it is in the firm's interest to withhold the information. This scenario actually applies in more than one of the 11 above mentioned enforcement notices. As an example, in December 2010 one firm still had not complied with the enforcement action that Ofcom had started in February 2010. As the firm had not filed account with Companies House, its turnover is unknown and Ofcom has not been able to impose any penalty under section 96 (for breaching core obligations). As a result, consumer harm has not been remedied.

Benefits

50. Whilst this option does not produce any direct benefits in itself, it is important to note that the 'baseline' scenario still involves the implementation of the above mandatory changes to Article 10, which is likely to reduce a proportion of consumer detriment in the market.

Risks

51. The revised legislation clearly states that Member States must provide for dissuasive financial penalties. Given that there remain a number of instances where firms do not fully respond to Ofcom's information gathering powers, there is a risk that maintaining the current maximum of £50,000 will not be seen as dissuasive; meaning that the UK would not be compliant with European legislation.

Option 2 – increase the maximum penalty to £2 million

52. Under this option, the maximum penalty that Ofcom could issue to firms for failing to comply with an information enforcement notice would increase to £2 million (such an increase recently done for

silent calls). This sanction would apply to both electronic communication matters (under the Communications Act) and Ofcom's new information gathering power for spectrum (under the WTA, see above).

Costs

53. Increasing the maximum penalty will only have an impact on firms that are not compliant with their obligations in terms of information provision. If a higher penalty is incurred, it would be treated as an economic transfer from the offending company to Ofcom; however, given that it only arises where a provider is not fulfilling its legal obligations it is not considered to be a regulatory cost to business.

Benefits

54. The principal benefit of increasing the maximum sanction available to Ofcom is that it should enable the regulator to perform its duties as set out by the Directive, which could lead to a consumer protection benefits. Specifically, it provides for a higher deterrent for non-compliance and it also gives Ofcom greater scope to punish non-compliance.
55. If this option provides a deterrent that incentivises firms to provide Ofcom with the information it needs on a timelier basis, then Ofcom will be in a better position to monitor the market and, if necessary, enforce obligations associated with the legislation. Investigations should also be resolved more quickly and efficiently on the basis of more reliable information. This is likely to have particular relevance to the larger network operators and service providers that dominate the communications market, most of whom generate hundreds of millions of pounds in revenue per year¹⁴, as they are more likely to ensure that the information they provide is accurate and factual.
56. It is not possible to accurately quantify the impact this option would have on the level of consumer harm in the market. It would be useful to assess the impact of increasing the penalty for silent calls but given that this has only been in place for a short while, such an analysis cannot be undertaken. However, given that this increasing the maximum sanction is effectively 'zero-cost' to firms that adhere to their obligations, any reduction in consumer detriment will bring a net benefit to the market.
57. As discussed in a number of consultation responses, it should be stressed that failure to comply with an information request under section 135 is not equivalent to silent calls or a breach in obligations, as the latter results in direct consumer harm. Therefore, improving Ofcom's information gathering power is unlikely to have the same impact as enhancing its more general enforcement powers. However, given that the regulator needs timely and accurate information to monitor compliance in the market, ensuring that firms comply with their information obligations under section 135 does have an *indirect* link to consumer detriment, meaning that it could have a beneficial effect if the deterrent is made stronger.
58. In addition, a higher limit increases Ofcom's flexibility to adequately penalise companies for any aggravating factors. A relatively low fixed penalty means that once a firm's conduct goes beyond a certain degree of seriousness, the punishment cannot match it, meaning that it is near-impossible to properly penalise the offending company.

Risks

59. It is possible for communication providers to appeal the imposition of fines to the Competition Appeal Tribunal. In the event that a higher penalty does not prove to be a deterrent – and so Ofcom will be required to exercise it – it could lead to a more litigious environment and increase the likelihood of appeals, rather than having firms work with Ofcom to resolve the information request. This could result in costly legal proceedings and delays in gathering the necessary information.
60. A number of firms stated in their responses to the Government consultation that the current sanction of up to £50,000 was adequately dissuasive and argue that increasing it to £2 million could be disproportionate, particularly given that Ofcom has not extensively exercised its sanction powers during the past seven years. However, this should be mitigated by Ofcom's legal obligation to ensure

¹⁴ For example a report commissioned by DCMS illustrates that nine communication service providers in the UK have a total revenue of approximately £37 billion (Detica, 'Impact of Security and Integrity provisions of the EU Electronic Communications Framework' March 2011)

that any sanction is proportionate, bearing in mind that £2 million is the maximum fine (in practice it is likely that penalties will start at a lower level). In setting the penalty, Ofcom also ensures that it has regards to the particular facts of the case (for example it will not treat requests for significant amounts of information the same as requests for shorter pieces of information).

Preferred Option

61. Government intends to pursue option 2 and increase the maximum penalty to £2 million. The current maximum of £50,000 has not proved to be dissuasive for all firms in the market, which is now a requirement under the revised legislation. Furthermore, any indirect fall in consumer harm will result in a net benefit as the option is effectively zero cost for compliant communication providers.

One-in, One-Out

62. The preferred option does not fall under the scope of the Coalition Government's 'One-In One-Out' rule because it relates to penalties¹⁵. Furthermore, as discussed above there is a risk that maintaining the current penalty will not be compliant with the revised Authorisation Directive, which requires the provision of "dissuasive" financial penalties.

Summary of impacts

63. Table 1 below summarises the main impacts of the UK implementing the changes to the Authorisation Directive.

Table 1: Summary table of impacts

Legislative change	Costs	Benefits
<p>Article 10 – compliance with general authorisations and rights of use</p> <p>Strengthening of Ofcom's enforcement powers</p>	<p>Costs to industry – not quantifiable as implementation details are not yet known. Ofcom will to consult on revisions to enforcement guidelines, after which costs will become clear. Fully compliant firms will bear negligible costs though.</p> <p>Costs to Ofcom -- negligible</p>	<p>Indicative estimate of consumer detriment in the telecommunications sector is £4.2 million per year. Ensuring that fewer companies breach their obligations should result in a reduction to this detriment.</p> <p>In the wider context, strengthening enforcement and regulatory compliance in other countries may also increase incentives for UK communication providers to export their services in the EU.</p>
<p>Article 10(1) - information gathering and spectrum</p> <p>Ofcom given a power to request information on spectrum-related functions</p>	<p>Costs to industry of responding to information requests - £78,000 per year</p> <p>Costs to Ofcom - negligible</p>	<p>Not possible to quantify. Ofcom receive more than 5,000 spectrum complaints per month. Illegal broadcasting is estimated to affect radio quality for 2 million adults on a weekly basis.</p> <p>The size of the problem is therefore likely to be much greater than the quantified cost to industry. If additional information leads to more effective enforcement, the benefits could be significant.</p>
<p>Articles 10 and 11 – dissuasive sanctions (preferred option)</p> <p>Ofcom can impose a penalty of up to £2 million if firms breach their obligations to provide information</p>	<p>Costs to industry – no cost if firms are compliant with their regulatory obligations</p> <p>Costs to Ofcom - negligible</p>	<p>Increased penalty will act as a deterrent for firms to comply with their obligations, as currently not all communication providers are 100% compliant. This should reduce the level of consumer detriment in the market.</p>

¹⁵ HM Government, 'One-In, One-Out Methodology' (January 2011) states that fine and penalties levied on a regulated entity for non-compliance with a regulation is out of scope of OIOO.

Specific impact tests

Competition

The changes required to the UK regulatory regime that arise from amendments to the Authorisation Directive are not expected to have a significant effect on competition in the UK market. However, changes to the authorisation regime in other EU countries may have a positive effect on competition within the single EU electronic communications market as inconsistencies in authorisation regimes can act as barriers to businesses operating, or setting up, across Member States. By reducing these barriers, competition within the single market may improve as firms operate on a more level playing field. The potential benefits of these are addressed in the overarching impact assessment.

Small Firms

After initial screening, there is not expected to be a disproportionate effect of the Directive on small firms.

Other Specific Impact Tests

Other environment/ rural proofing

After an initial screening it has been deemed that no significant impact is anticipated on the environment and rural proofing.

Statutory Equality Tests

The Equality Impact Assessment provides an assessment on these issues.

Other tests

Other specific impact tests have been considered including Legal Aid, Sustainable Development and Carbon Assessment. Again, after initial screening, it has been deemed that no significant impact is anticipated.

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p>Basis of the review: [The basis of the review could be statutory (forming part of the legislation), i.e. a sunset clause or a duty to review, or there could be a political commitment to review (PIR)]; See PIR plan in overarching impact assessment</p>
<p>Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]</p>
<p>Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]</p>
<p>Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]</p>
<p>Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]</p>
<p>Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection systematic collection of monitoring information for future policy review]</p>
<p>Reasons for not planning a review: [If there is no plan to do a PIR please provide reasons here]</p>



department for
culture, media
and sport

Implementing the revised EU Electronic Communications Framework

Impact Assessment

April 2011

improving
the quality
of life for all

Our aim is to improve the quality of life for all through cultural and sporting activities, support the pursuit of excellence, and champion the tourism, creative and leisure industries.

Department for Culture, Media and Sport

www.dcms.gov.uk

First published April 2011 © Crown Copyright

List of Impact Assessments

1. Overarching Impact Assessment
2. Framework Directive
3. Framework Directive Annex 1: Spectrum
4. Framework Directive Annex 2: Infrastructure Sharing
5. Framework Directive Annex 3: Security and Resilience
6. E-Privacy Directive
7. E-Privacy Directive Annex 1: Internet Cookies
8. Authorisation Directive
9. Access Directive
10. Universal Services Directive

Title: Implementing the Revised EU Electronic Communications Framework Lead department or agency: Department for Culture, Media and Sport Other departments or agencies: Ofcom, ICO	Impact Assessment (IA)
	IA No: DCMS015
	Date: 04/03/2011
	Stage: Final
	Source of intervention: EU
	Type of measure: Secondary legislation
Contact for enquiries: Stephen Fernando (020 7215 6320)	

Summary: Intervention and Options

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

Without effective regulation, the electronic communications sector is characterised by natural monopoly, sunk costs and significant economies of scale. As a 'network industry', large operators have an overwhelming advantage over its competitors, resulting in a significant and non-transitory barrier to entry. Given the economics costs associated with monopolistic markets, such as deadweight loss and consumer detriment, it is necessary for Government or a public body to regulate the market in order to foster and promote competition. Furthermore, given that the vast majority of the public now access some form of electronic communication, it is necessary to address consumer issues such as security, privacy and universal access because failure to do so can lead to significant detriment.

What are the policy objectives and the intended effects?

This UK is required to implement the EU Electronic Communications Framework (composed of five Directives). The first Framework was implemented in 2003, mainly through the Communications Act 2003 but following a review that examined how well the regulatory framework had achieved its objectives, the package of Directives have been amended to better achieve their aims. These are:

- ensure effective competition which brings tangible benefits to consumers, in particular through greater choice of services and lower prices
- promote investment and innovation in high-speed communications infrastructure and new services
- protect consumers' interests

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

The Government is required to implement a number of changes within the Directives that allow for no flexibility in implementation. These include a requirement for Ofcom to conduct market reviews every 3 years (it currently does so every 4-5 years) and the provision of enhanced enforcement powers to Ofcom and ICO in order to ensure that firms are compliant with their regulatory obligations. These amendments are assessed against a counterfactual 'no change' scenario, without looking at other discrete options. For legislative changes where the UK has flexibility in implementation, a number of options are analysed. These include issues related to: the security and resilience of electronic communication networks; collecting information on the location and availability of infrastructure, and; options to implement the consumer's right to consent to any attempt to store (or access) internet cookies on a user's equipment. In accordance with Better Regulation principles, the Government's preferred option is to largely utilise a "copy out" approach for transposing the Directives into UK law.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 5/2016

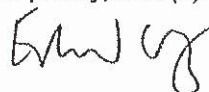
What is the basis for this review? Duty to review. If applicable, set sunset clause date: Month/Year

Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes
---	-----

SELECT SIGNATORY Sign-off For final proposal stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister:



Date: 24/03/2011

Summary: Analysis and Evidence

Policy Option 1

Description:

Government's preferred approach to implementing the EU Electronic Communications Framework

Price Base Year 2011	PV Base Year 2011	Time Period Years 2011	Net Benefit (Present Value (PV)) (£m)		
			Low: -130	High: -19.5	Best Estimate: -74.3

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.3	2.7	23.5
High	0.4	15.4	133
Best Estimate	0.35	9	77.8

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

Requirement for Ofcom to conduct market reviews every 3 years instead of 4-5 years may increase burden on Ofcom by 187k-£1.3m per year and industry by £1.6m-£10.6m per year. Requirement for industry to notify ICO of data breaches could cost £240k-£2m per year. Other costs are mostly associated with enhanced information gathering powers for both Ofcom and ICO, with industry needing to spend £380k-£750k responding to information requests, particularly on location of infrastructure.

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

Industry self-regulation will ensure that consumers can give consent to the storing of and access to internet cookies on their computer. Behavioural advertising and web-analytics companies will incur costs to provide more information (e.g. testing and standardisation). Browser vendors will incur costs to reprogramme browsers and provide enhanced settings. They will also need to communicate settings and technologies to web developers and third parties. Consumers will need time to read information.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.22	0.32	3
High	0.45	0.41	4
Best Estimate	0.33	0.36	3.5

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

Ofcom will have a cost recovery power for disputes that are brought to them, which should encourage greater alternative dispute resolution. Changes to the Access Directive reduce scope for disputes as well. Total annual saving to Ofcom/industry is could be £215k-£310k per year due to fewer disputes. Simplification of spectrum trading will reduce regulatory costs, resulting in a one-off saving of £210k-£450k and annual running cost savings of around £100k.

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

EU regulatory changes are more applicable to other countries than the UK. Greater regulatory consistency within the internal market could increase UK trade in e-communication services, creating benefits of tens or hundreds of millions of pounds per year. Consumer protection measures could benefit consumers by millions of pounds per year if it leads to a reduction in data breaches, online fraud, scams etc. Improvements to UK regulatory environment could increase investment by millions of pounds per year.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

Cost estimates draw on information submitted by Ofcom and secondary literature. Very little quantitative data was received during the consultation and little quantitative evidence was provided in the Commission's impact assessment. Therefore, estimates should be treated as orders of magnitude. The key cost driver is the increase in market review frequency, though this may have been overestimated in the event that Ofcom delays some reviews (allowed under exceptional circumstances) or if some markets become competitive. Most of the costs and benefits will depend on how Ofcom implements the powers it has been given under the revised Framework. These will be subject to an impact assessment by Ofcom, which is required for any proposal that has significant impact either on communication firms or the general public

Direct impact on business (Equivalent Annual) £m):	In scope of OIOO?	Measure qualifies as
Costs: 8	No	NA
Benefits: 0.3		
Net: -7.7		

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	United Kingdom				
From what date will the policy be implemented?	25/05/2011				
Which organisation(s) will enforce the policy?	Ofcom, ICO				
What is the annual change in enforcement cost (£m)?	1				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	No				
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: N/A		Non-traded: N/A		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs:		Benefits:		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties¹ Statutory Equality Duties Impact Test guidance	Yes	17
Economic impacts		
Competition Competition Assessment Impact Test guidance	Yes	17
Small firms Small Firms Impact Test guidance	Yes	17
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development Sustainable Development Impact Test guidance	No	

¹ Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	Government consultation http://www.bis.gov.uk/Consultations/revised-eu-electronic-communications-framework
2	EC Legislative proposals and impact assessment http://ec.europa.eu/information_society/policy/ecom/library/proposals/index_en.htm
3	Full European Legislation http://ec.europa.eu/information_society/policy/ecom/doc/library/regframeforec_dec2009.pdf
4	Communications Act 2003 http://www.legislation.gov.uk/ukpga/2003/21/contents
5	Wireless Telegraphy Act 2006 http://www.legislation.gov.uk/ukpga/2006/36/contents
6	The Privacy and Electronic Communications (EC Directive) Regulations 2003 http://www.legislation.gov.uk/uksi/2003/2426/contents/made

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs	0.35									
Annual recurring cost	9	9	9	9	9	9	9	9	9	9
Total annual costs	9.35	9	9	9	9	9	9	9	9	9
Transition benefits	0.33									
Annual recurring benefits	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total annual benefits	0.69	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36

* For non-monetised benefits please see summary pages and main evidence base section

Evidence Base (for summary sheets)

Executive Summary

1. In 2002, EU Member States reached agreement on a regulatory Framework for electronic communication networks and services. The Framework – consisting of five Directives - provides a common set of rules for all communications that are transmitted electronically. Its aim was to harmonise regulation governing the provision of e-communications across the EU, which would help to reduce entry barriers and foster effective competition and ultimately lead to the creation of an internal market in this sector.
2. The Framework contained an inbuilt review mechanism. The purpose of the review was to examine how well the regulatory framework had achieved its objectives - namely promoting competition and the interests of citizens as well as working towards the creation of an internal market - and how the framework could be changed such that it continues to meet the needs of the sector and consumers. Consequently, the European Commission put forward its proposals for changes needed to better ensure the efficient working of the regulation.
3. The revised Framework was finally adopted in November 2009 after two years of complex negotiations. The amendments have been made to raise standards of regulation and competition across all 27 European Member State communications markets. As a Member State, it is mandatory under EU law that the provisions are transposed in the UK.
4. This Final Stage Impact Assessment accompanies the Government response to the paper, published in September 2010 which set out the Government's proposed approach to implementing the revised EU Electronic Communications Framework¹.
5. Being ahead of many other Member States, the additional costs of implementing the legislative changes will therefore be lower in the UK than other EU countries because there are fewer changes required to current regulation. This also means that the direct benefits to the UK from implementing the revised Framework are likely to be lower than in other Member States because businesses and consumers are already experiencing many of the benefits the amendments are designed to achieve.
6. A key benefit coming from the revised EU framework is the further development of the single market. The electronic communications market in the European Union is worth at least £152 billion in GVA and £345 billion in turnover². Around 98 per cent of EU households have access to at least one telephone (fixed and/or mobile) whilst 57 per cent have an internet connection³. This means that there is a market of around 488 million electronic communication customers in the EU⁴.
7. In 2009, the UK exported just over £3.5 billion worth of telecommunication services in total, an increase of more than one third since 2003⁵. However, whilst the absolute value of exports to the EU has increased over this period, DCMS analysis indicates that as a share of total telecommunication exports, exports to the EU actually fell from around two thirds in 2005 to just over one half in 2009 (around £18 billion), whilst imports remained fairly constant at one half⁶. Therefore, if the changes contribute to a higher standard of regulation in other EU countries – thus levelling the playing field for all European firms – then the potential benefits to the UK could be significantly larger than the costs outlined in Table 1 below.

¹ <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/i/10-1132-implementing-revised-electronic-communications-framework-consultation.pdf>

² Source: Structural Business Statistics, Eurostat. An exchange rate of 0.796 between the euro and pound sterling was used (Eurostat yearly average exchange rates). The value of the sector is likely to be higher as it may exclude parts of electronic communications as it relates to broadcasting.

³ Eurobarometer, 'E-Communications Household Survey Report' (October 2010)

⁴ Total population of EU27 countries was estimated to be around 498 million in 2009 (Source: Eurostat).

⁵ ONS, 'Pink Book 2010'

⁶ BIS Analysis of ONS trade statistics ('Pink Book') for Communication Services. The latter includes postal and courier services but it is assumed that the proportion of telecommunications is the same because the latter has made up 80-90 per cent of communications trade during the past five years.

In terms of foreign investment in the electronic communications sector (both inward and outward), it is difficult to obtain robust data as the relevant ONS publication includes it under a broad definition of 'Information and Communications'. See ONS' Business Monitor MA4, Foreign Direct Investment 2009 http://www.statistics.gov.uk/downloads/theme_economy/MA42009.pdf. In terms of obtaining time series data, this is made difficult by the fact that 'communications' was put under the same heading as 'transport'.

8. The scope of this Impact Assessment is to assess the changes that will have significant effects on consumers, communication providers and public bodies (including regulators in the UK). New articles or changes to existing articles that the UK is already compliant with, or where no impacts are likely to result, are not covered in the analysis. There are nine impact assessments that accompany this document, five of which discuss the impact of changes to individual directives and a further four to assess specific issues arising from these Directives that could have a significant impact on the market.
9. Most of the changes contained within the framework are largely technical: any significant changes are contained within the Framework Directive and the e-privacy Directive while the changes in the other directives – Authorisation, Universal Service and Access – are assessed to have generally small impacts.
10. Quantifying the costs and benefits of the additional impact of the legislative changes emanating from the revised EU framework has been quite difficult, with a general lack of evidence. It should be noted the European Commission's impact assessment⁷ did not contain relevant quantitative estimates and the Government did not receive further evidence on the issue in response to the consultation.
11. As part of the consultation, officials organized four large-scale events for stakeholders (each attended by over 120 representatives) and four smaller events on specific policy issues of concern (including security and resilience and infrastructure sharing). At each of the events, officials put out a call for evidence. Officials also spoke at seven public events organized by stakeholders, at which the latter were asked to contribute any relevant data that could be included in the evidence base, in addition to meeting individually with over 82 stakeholders during the consultation period. The Impact Assessment accompanying the consultation also included a questionnaire to help build the evidence base and was sent out to over 400 stakeholders online. In addition, the Government commissioned two research projects on areas of potentially high impact – security & resilience and internet cookies.
12. Where possible, the evidence above has been built in the underlying impact assessments. However, in many cases, there is insufficient quantitative data to provide robust estimates of costs and benefits, either because firms were reluctant to provide information or because they were unable to. The latter is due to the fact that in a number of areas the impact of the legislative changes will depend on how Ofcom and ICO (Information Commissioner's Office) implement them as the independent regulators.
13. With regards to changes that require the UK to give Ofcom (or ICO) discretionary powers (for example with regards to functional separation and infrastructure sharing), it is not possible to accurately identify the costs and benefits because the regulatory impact depends on the manner in which Ofcom uses its power and implements the legislation. Furthermore, Government cannot direct Ofcom to implement the legislation in a certain way without compromising the regulator's independence. However, in the event that Ofcom exercises one of the powers it receives or if it decides to implement changes to its regulatory framework, it is under a legal obligation (under section 7 of the Communications Act 2003) to carry out impact assessments when it proposes to do anything for the purposes of carrying out its functions which will have a significant impact either on firms in the electronic communications sector or the general public. Therefore, the Act ensures that the regulator implements its powers in a proportionate, accountable and transparent manner.
14. Given the gaps in the evidence base outlined above, existing evidence has been used to provide ranges and order of magnitudes, as well as a qualitative assessment of impacts. A summary of these is provided in Table 1 below.

⁷ European Commission, Impact Assessment – Accompanying document to Legislative Proposals, http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/1472/comm_pdf_sec_2007_1472_1_en_documentdetravail.pdf

Table 1: Summary table of impacts

Directive	Costs	Benefits
Framework Directive	<p>Costs to industry estimated to be £2 million - £11.4 million per year. The majority of this is due a requirement to conduct market reviews every 3 years compared to the current rate of 4-5 years, which will increase burdens associated with gathering evidence and responding to market reviews. Other significant costs are associated with providing Ofcom with more information, particularly requests on the location of key infrastructure.</p> <p>Costs to Ofcom estimated to be £190k-£333k one-off and £366k - £1.5 million per year. Costs are mostly incurred by conducting more market reviews and managing requests for information on infrastructure.</p>	<p>Direct regulatory impact cannot be estimated. However, benefits could be in the order of tens of millions of pounds. For example if improving information on the location and capacity of key infrastructure leads to greater sharing of infrastructure between network owners, even if this increases the roll-out of superfast broadband by 0.1%, the benefits could be worth around £18 million.</p> <p>An improvement in the UK's regulatory framework – e.g. more efficient and effective dispute resolution process - could increase investment by tens of millions of pounds.</p>
e-Privacy Directive	<p>Costs to industry estimated to be £320k - £2.3 million per year. This is due to a requirement to notify ICO of data breaches and respond to ICO audits and requests for information.</p> <p>Industry self-regulation will ensure that consumers can give consent to the storing and access of internet cookies on their computer. Browser vendors are likely to incur significant costs in reprogramming browsers and providing enhanced settings, whilst firms active in behavioural advertising will incur costs to provide more information to consumers. These cannot be quantified until the details of implementation have been finalised.</p> <p>Costs to ICO expected to be negligible.</p>	<p>Direct regulatory impact cannot be estimated. However, benefits could potentially exceed costs by a significant amount. If it leads to a 0.1% fall in the annual cost of identity theft or online scams, the benefits to consumers could be around £1.5 million per year. Making consumers fully informed about the nature and options regarding internet cookies are in the order of £300 million - £380 million per year. Legislative changes will give ICO more information and powers to pursue tens of thousands of consumer complaints regarding unwanted marketing calls, which currently cannot be tackled. Actual number of consumers affected likely to be much higher.</p>
Authorisation Directive	<p>Costs to industry estimated to be £78k per year to respond to Ofcom information requests on spectrum management. There may be further costs due to a strengthening of Ofcom's enforcement guidelines but this will not be clear until after Ofcom consultation. Costs should be minimal if firms are fully compliant with their obligations.</p>	<p>Direct regulatory impact cannot be estimated. Indicative estimate of consumer detriment in the telecommunications sector is £4.2 million per year. Ensuring that fewer companies breach their obligations should result in a reduction to this detriment.</p> <p>With regards to spectrum, Ofcom receive more than 5,000 spectrum complaints per month. Illegal broadcasting is estimated to affect radio quality for 2 million adults on a weekly basis. The size of the problem is therefore likely to be much greater than the quantified cost to industry. If additional information leads to more effective enforcement, the benefits could be significant.</p>
Access Directive	<p>The Access Directive requires the UK to give Ofcom certain discretionary powers, for example under the Communications Act it will be possible to operationally separate an incumbent network owner if it represents a proportionate and effective remedy to monopoly power. However, because changes to the Directive give Ofcom enabling powers (rather than directly regulate the electronic communications market) there is no direct cost. Ofcom has also already imposed functional separation on BT.</p>	
Universal Services Directive	<p>The Universal Service Directive aims to promote the interests of consumers and it includes a number of consumer protection measures including transparency in consumer contracts. In addition the Universal Service Directive also updates and strengthens provisions in the area of eAccessibility and the rights of users with disabilities.</p> <p>Some of these new obligations set out current UK practice and so will not constitute a new regulatory burden as such. Others empower (but do not require) Ofcom to impose regulation. At present, however, the direct cost is small.</p>	

Background

15. In 2002, EU Member States reached agreement on a regulatory Framework for electronic communication networks and services. The Framework provides a common set of rules for all communications that are transmitted electronically, whether wireless or fixed, data or voice, internet-based or circuit switched, broadcast or personal. This means that it covers the transmission and access of fixed and mobile telephone services, the internet (including email) and content based broadcasting. Its aim was to harmonise regulation governing the provision of e-communications across the EU, which would help to reduce entry barriers and foster effective competition and ultimately lead to the creation of an internal market in this sector. The legislation was based on five EU Directives:
- the "Framework" Directive (2002/21/EC)
 - the "Access" Directive (2002/19/EC)
 - the "Authorisation" Directive (2002/20/EC)
 - the "Universal Service" Directive (2002/22/EC)
 - the "E-Privacy" Directive (2002/58/EC)
16. The Framework, which was implemented in the UK through the Communications Act 2003, the Privacy and Electronic Communications (EC Directive) Regulations 2003 and the Wireless Telegraphy Act 2006⁸, contained an inbuilt review mechanism (see Annex 2 for further details). The purpose of the review was to examine how well the regulatory framework had achieved its objectives (namely promoting competition and the interests of citizens) and how the framework could be changed in light of technological and market developments, such that it continues to meet the needs of the sector and consumers over the coming decade. The review also took into account policy developments that had taken place since the Framework was adopted that needed to be incorporated into the legal framework.
17. Consequently, the European Commission put forward its proposals for changes needed to better ensure the efficient working of the regulation in November 2007. The revised Framework was finally adopted in November 2009 after two years of complex negotiations, with amendments to the five directives being made through two amending EU Directives⁹. The amendments have been made to raise standards of regulation and competition across all 27 European Member State communications markets. As a Member State, it is mandatory under EU law that the provisions are transposed in the UK.
18. In September 2010, the Department for Business, Innovation and Skills (BIS) published a paper setting out Government's proposed approach to implementing the revised Framework¹⁰, as well as questions for stakeholders on the areas where the Government has some discretion in implementation. The paper was accompanied by an Impact Assessment¹¹. During the 3 month consultation period, stakeholders had an opportunity to engage with BIS¹² at a series of events, in addition to submitting written responses to the proposed approach. Furthermore, two research studies were commissioned in order to gain a better understanding of the likely effects of the security and resilience and e-Privacy provisions in the Framework, as these were identified as high impact.

⁸ The Wireless Telegraphy Act 2006 is a consolidation of previous Wireless Telegraphy Acts

⁹ Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services (the so-called "Better Regulation amending Directive), and

Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.

¹⁰ <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/i/10-1132-implementing-revised-electronic-communications-framework-consultation.pdf>

¹¹ <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/i/10-1133-implementing-revised-electronic-communications-framework-impact.pdf>

¹² In December 2010, The Prime Minister decided that competition issues relating to the media, broadcasting, digital and telecoms sectors would transfer from the Department for Business, Innovation and Skills (BIS) to the Department for Culture, Media and Sport (DCMS). The machinery of government change has since taken place and responsibility has been transferred for these areas, which includes telecoms policy and the implementation of the EU framework.

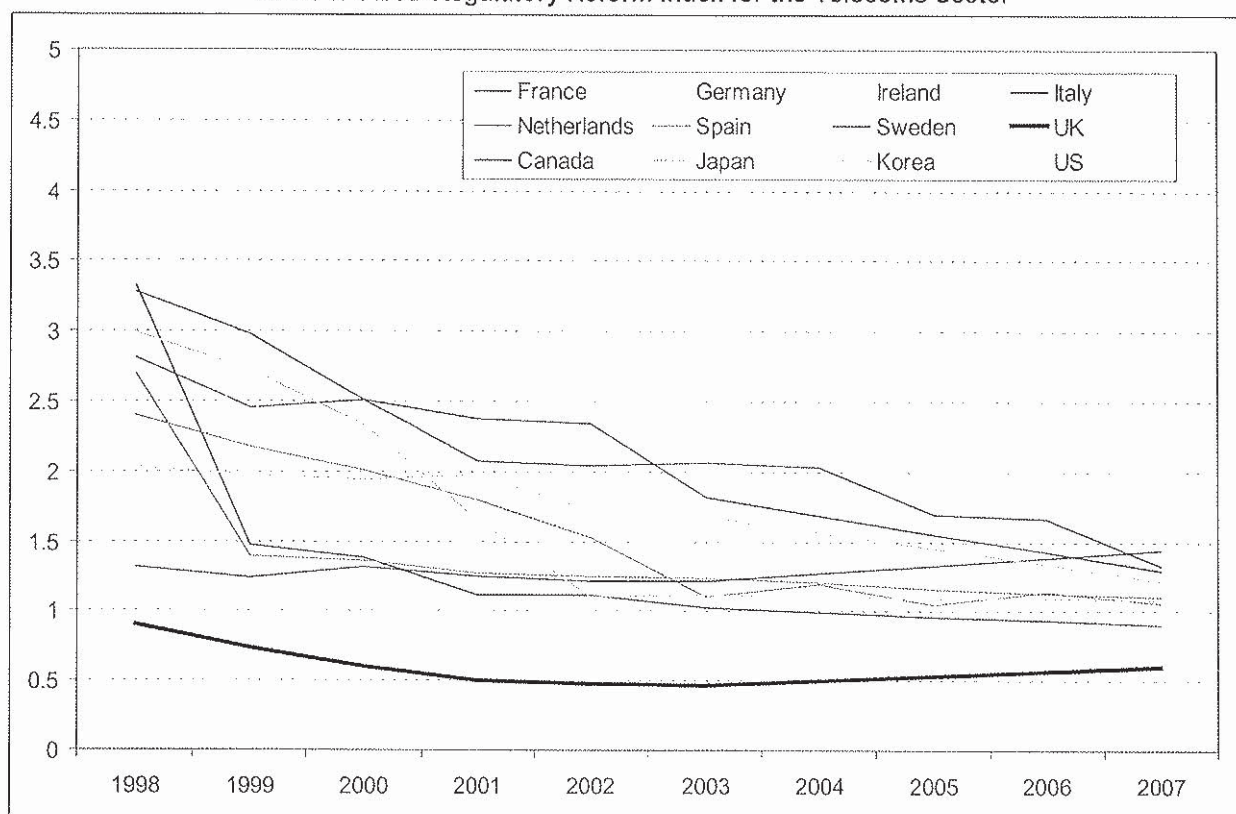
Together, these responses and evidence have informed the Government's final decision on how to implement the legislation.

19. The Government intends to implement the amendments (which are targeted measures to bring specific areas in line with the EU electronic communications market) in a proportionate manner to achieve the desired outcomes without gold-plating. In this regard, it will largely utilise a "copy out" approach for transposing the Directives into UK law, in accordance with the guidance issued by the Better Regulation Executive¹³.
20. This impact assessment looks at the effects of implementing the transposition requirements of the revised Framework in the UK (which is required by 25 May 2011) where these amendments are not already covered by existing legislation. The detailed analysis is divided into ten documents, five which look at the amended Directives individually and another five analysing specific topics that have the potential to have a significant impact in their own right.
21. The UK, which has a highly developed and sophisticated communications market, is already working towards the same goals as the revised Framework through the continued implementation of the Digital Economy Act 2010 and interventions to liberalise spectrum management. Therefore, a number of the amendments made to the Framework are already present in existing UK legislation. In addition, although the legislative proposals comprise around 150 changes as a whole, many are minor updates or repeals of obsolete provisions.
22. The scope of this impact assessment is therefore to analyse changes that will have significant effects on consumers, communication providers and/or Government and regulators. New articles or changes to existing articles that the UK is already compliant with, or where no impacts are likely to result, are not covered in the analysis. In determining which legislative amendments are 'significant', and therefore warrant assessment, DCMS has been guided by the topics covered in the Government consultation document and regulatory changes that were raised in a number of consultation responses as having a significant consequence.
23. The articles are grouped into two categories. Whilst both cover areas of legislation that require changes to be made, and are therefore likely to incur costs and benefits, Category 1 articles are those where the Framework contains no provisions for leeway in implementation. By contrast, Category 2 articles do have options available. In so far as it is possible, estimates of costs and benefits of all articles under categories 1 and 2 have been made. However, for category 1 it is not possible to identify discrete 'options' for implementation. Therefore, the costs and benefits of these are analysed without looking at various options for implementation.
24. It is important to note that one of the key objectives of the overall EU Framework is to harmonise regulation governing the provision of electronic communications across the EU, in order to reduce entry barriers and foster effective competition, ultimately leading to the creation of an internal market in the sector. Whilst progress has been made on this during the past seven years, there remain significant barriers in certain countries. In the UK, however, there is already a highly developed and competitive electronic communications market (see Annex 3 for further details).
25. UK regulation of the market is also very effective in comparison to other countries. Chart 1 below shows how the UK has performed in relation to its counterparts over a ten year period – the fact that the UK's score in 1998 was lower than most other European countries in 2007 shows how much progress it made relative to its counterparts. A separate regulatory scorecard also confirms the UK to be one of the leading European countries with regards to e-communications regulation¹⁴.

¹³ HM Government, 'Reducing Regulation Made Simple: Less regulation, better regulation and regulation as a last resort' (December 2010)

¹⁴ For further details, see <http://www.ectportal.com/en/REPORTS/Regulatory-Scorecards/Regulatory-Scorecard-2009/>

Chart 1: OECD Regulatory Reform Index for the Telecoms Sector



Source: OECD. The composition of the sectoral indicator for telecoms is based on the response to three types of questions: (1) The extent to which there is free entry into the market (from a regulatory perspective); (2) The extent to which the largest firms in the fixed and mobile sectors are owned by the Government; and (3) The market structure, based on market shares of new entrants. Scores are normalised to be between 0 and 6, such that a lower number represents a regulatory regime with fewer impediments.

The Electronic Communications Sector – Scale and Coverage

26. Electronic communications play a pivotal role in the UK economy and also permeate numerous social and cultural activities. Businesses rely on the sector both in terms of direct sales and for the efficiency and effectiveness of internal management and production processes. Recent research by Ofcom shows that among businesses in the UK as a whole, the majority use landline, internet and mobile phone services (91%, 90% and 71% respectively), with firms placing a high degree of importance on all of these¹⁵. This is demonstrated in a recent report on the internet economy, which found that in 2008 non-financial businesses made almost a quarter – or £360 billion – of their purchases over the internet and other electronic channels¹⁶.

27. Consumers also heavily rely on e-communication in their daily activities, with almost half of people's waking hours spent engaging in media and communication activities, such as watching television, listening to the radio and social networking¹⁷. The overwhelming majority of households have digital television (93%) and listen to the radio (91%) on a weekly basis, whilst more than 90% of individuals in the country now have a mobile telephone and about three-quarters access the internet¹⁸. The latter facilitated around £50 billion of consumption on goods and services in 2009, with the average household saving almost £1,000 per year from shopping online. It is also estimated that consumer surplus from free internet content is worth around £5 billion annually¹⁹.

28. Lastly, a high speed and reliable communications infrastructure is not only important to consumers and businesses but it is also crucial to the functioning of Government and the delivery of emergency

¹⁵ Ofcom, 'The Business Consumer Experience' (December 2010)

¹⁶ The Boston Consulting Group, 'The Connected Kingdom: How the Internet is Transforming the UK Economy' (October 2010)

¹⁷ Ofcom, 'Communications Market Report' (2010)

¹⁸ Ofcom, 'The Consumer Experience' (December 2010)

¹⁹ The Boston Consulting Group, 'The Connected Kingdom: How the Internet is Transforming the UK Economy' (October 2010)

services. This is reflected in the Government's recent National Security Strategy²⁰, which lists attacks on UK cyber space as one of four Tier One priority risks.

29. In addition to acting as a key enabler of economic and social activity, electronic communications is significant in its own right. The sector generated around £50 billion of revenue in 2009 and has maintained a similar performance during the past five years²¹. The majority of this (about three quarters) comes from the telecommunications sector, which includes fixed and mobile telephones and internet access. According to the Office for National Statistics²², the telecommunications and broadcasting sectors contribute almost £35 billion in Gross Value Added to the UK economy (about 2.7% of the total) and employ approximately 236,000 individuals, although it should be noted that the ONS include activities such as broadcasting content, programming, network installation and maintenance. Therefore, the figures will be slight overestimates compared to the definitions used by Ofcom.
30. As Ofcom does not operate a licensing regime, the exact number of electronic communication providers is unknown. However, it is estimated that there are currently more than 600 providers in the UK, divided into the following: fixed network operators; mobile network operators; cable operators, and; service providers. The latter includes firms that provide access to electronic communications even though they do not operate a network, for example some internet service providers. Table 2 shows the number of providers for some of these. In addition, there are a wide range of service providers for fixed telephone and the internet, as well as firms that purchase and resell network capacity without providing additional services ('resellers'). Whilst recent figures are not available, research by Ofcom in 2007 indicated that the UK niche ISP market was made up of approximately 686 service providing businesses²³, although it is likely that this has fallen in recent years due to market consolidation. In addition, there are an estimated 70 – 100 resellers in the UK that provide mobile phone services and more than 700 broadcast channels²⁴.

Table 2: Number of Communication Providers in the UK (2010)

Communication Type	Number of Providers
Fixed PSTN* (local, national and international)	120
Mobile	4
Mobile Virtual Network Operators**	30+
Licensed Cable Operators	2

Source: Ofcom and OECD

* Public switched telephone network (or PSTN) is the network that manages circuit-switched fixed-line telephone systems. This figure is an estimate as the UK does not have a licensing regime for the telecommunications industry.

** MVNOs are organisations which provide mobile telephone services to its customers, but do not have allocation of spectrum or their own wireless network

31. The performance of the UK's electronic communications sector measures up strongly compared to its international counterparts. In terms of retail revenue, the UK has the third largest sector in Europe at £39 billion²⁵, behind Germany (£52 billion) and France (£44 billion). Furthermore, it has complete coverage for fixed and mobile telephone and broadband services, such that any household can access each form of electronic communication. In terms of household take up, only one per cent of UK households do *not* have access to at least one telephone (fixed and/or mobile), whilst the EU27

²⁰ HM Government, 'A Strong Britain in an Age of Uncertainty: The National Security Strategy' (October 2010)

²¹ Ofcom, 'Communications Market Report 2010'. It should be noted that these figures represent wholesale and retail revenues for all communications and are not completely restricted to the transmission of electronic communications (particularly for radio and television, which includes advertising revenue).

²² Annual Business Survey. The figures have been produced by using the 2007 SIC Codes for Programming and broadcasting activities (60) and Telecommunications (61).

²³ Ofcom, 'The Communications Market Special Report Niche ISPs' (2007)

²⁴ Statistics from the ONS Annual Business Survey suggest that there were 5,677 firms in the telecommunications industry in 2008 and 2,077 firms engaged in radio broadcasting and television programming and broadcasting. However, the latter includes numerous content and programme providers who rely on electronic communications for distribution but do not provide communication services in their own right (and so are out of scope of the EU Framework). The figures for telecommunications will also include firms that are not affected by the regulation as it includes activities such as the provision of specialised communications equipment (e.g. satellite tracking, communications telemetry and radar station operations) and the operation of satellite terminal stations and associated facilities. If one only uses the SIC Codes for wired telecommunication activities (SIC Code 61.1), wireless telecommunication activities (61.2) and satellite telecommunication activities (61.3) then the number of firms given is 636, which is reasonably consistent with Ofcom and DCMS estimates.

²⁵ This includes revenue from telecommunications, television and radio. It does not include wholesale revenues and so is less than the figure of £50 billion.

average is two per cent²⁶. With regards to the levels of competition and investment in the market, the UK compares very well with other countries, offering lower prices and more choice than most of its counterparts and investing more in the sector than any other country in Europe. Annex 3 provides further evidence on the key issues of competition, investment and consumer protection in the UK and other countries.

Rationale for Government Intervention

32. Without effective regulation, the electronic communications sector is characterised by natural monopoly, sunk costs and significant economies of scale. As a 'network industry', it is very costly to build and deploy the transmission networks and infrastructure required to provide communication services, meaning that essential networks are concentrated in the hands of a few powerful operators. Therefore, a large supplier has an overwhelming cost advantage over other actual and potential competitors, serving as a significant and non-transitory barrier to entry. Given the economic costs associated with monopolistic markets, such as deadweight loss and consumer detriment, it is necessary for Government and the national regulator to play a role in the market in order to foster and promote competition. Furthermore, given the wider impacts of electronic communications on society and the economy that are mentioned above, it is also desirable to ensure an appropriate balance between static efficiency (i.e. productive and allocative efficiency) and dynamic efficiency, which is achieved when firms have the correct incentives to invest and innovate.
33. In addition to competition, there are specific consumer issues that are relevant to electronic communications. Given that the majority of the British population now access some form of electronic communication, it is necessary for Government and regulators to address consumer concerns such as security, privacy and universal access because failure to do so can lead to significant detriment in terms of economic cost and physical and emotional distress.
34. It is ultimately these key issues – competition, investment (and innovation) and consumer protection – that are at the heart of the European regulatory framework, the objectives of which are to promote competition, contribute to the development of the internal market and to promote the interests of citizens. The purpose of the Commission's review of the 2002 Framework was to examine how well it had achieved these objectives and the rationale for amending it is to make further progress on them, as well as ensuring that regulation continues to meet the needs of the sector and consumers. In some cases, this could mean simplifying and reducing regulatory burdens. Further details about the outcome of the Commission's review can be found in Annex 2. The purpose of implementing the legislative changes is to move EU countries towards a more competitive and innovative internal market that protects consumers.

Policy Objectives

35. The main objectives of the regulatory framework, as defined by the European Commission are: to create an open and competitive single market for electronic communications services and networks in Europe, and thereby; to encourage innovation in communications networks and services, by both new entrants and existing operators, for the benefit of European businesses and citizens²⁷. The specific objectives that are addressed in the European Commission's impact assessment are those to:
- foster investment and growth in the e-communications market
 - promote more efficient and flexible spectrum management
 - increase the consistency of regulatory actions, in line with the wider objective of creating a single e-communications market in Europe
 - reduce red-tape and administrative costs
 - reinforce user rights and consumer protection
 - improve network security
36. Each of the five Directives that are associated with the European Framework tackle different issues, and they are addressed in detail in the attached impact assessments. The purpose of each

²⁶ Eurobarometer, 'E-Communications Household Survey Report' (October 2010)

²⁷ European Commission, Impact Assessment – Accompanying document to Legislative Proposals,

http://ec.europa.eu/information_society/policy/e-comm/doc/library/proposals/1472/comm_pdf_sec_2007_1472_1_en_documentdetravaii.pdf

document is to analyse the regulatory impact in the UK, focusing on the legislative amendments that are likely to result in significant costs and/or benefits, either for communication providers, consumers and/or Government and Ofcom. As discussed above, given that the UK compares well with most other countries in terms of effective regulation and promoting competition in electronic communications, many of the amendments will not affect the regulatory regime or they will only have a minimal impact. This means that a number of the benefits arising from the Framework will not apply to the UK, but are nevertheless important in other European countries and in the continued drive to make regulation across the EU consistent.

Summary of impacts

37. Table 3 below presents a summary of the most significant impacts of implementing four of the Directives. With regards to the Access Directive, all of the changes are enabling regulations that will be implemented by Ofcom, which will conduct its own impact assessment. Further detail on the impacts can be found in the specific impact assessments.

38. It is worth noting that although Ofcom's non-spectrum functions are funded by industry, there are no plans for the resource burdens associated with implementing the EU Framework's new requirements to be passed onto communication providers. In accordance with an agreement with HM Treasury, there is an overall ceiling on Ofcom's spending that has been reduced year-on-year since its creation. Furthermore, during the next four years Ofcom is expected to cut its overall real-terms budget by 28%²⁸. Therefore, any burdens incurred from implementing the Framework will most likely need to be met under Ofcom's existing budget and work plan, although further cost recovery cannot be completely ruled out in the future due to uncertainties in aspects of implementation (e.g. number of information requests for infrastructure location).

39. The one exception to cost-recovery, however, is in relation to dispute resolution (see Article 20 of the Framework Directive), where Government will give Ofcom a power to recover the costs of disputes from the disputing parties. In the event that Ofcom sees fit to make use of this power, the direct cost will be met by the firm(s) involved in the dispute rather than industry as a whole; therefore the net cost to industry will be zero. However, if the Framework leads to more or fewer disputes than would have been the case without the revised legislation, the costs/benefits could apply to industry rather than Ofcom. Further details on this issue can be found in the Framework Directive impact assessment.

Table 3: Table of impacts

	Legislative change	Costs	Benefits
Framework Directive	<p>Article 5 – provision of information</p> <p>Ofcom may request additional information from communication providers, relative to what it can already request under existing legislation.</p>	<p>Costs to industry estimated to be £0 - £78,000 per year (depending on the number of requests per year)</p> <p>Costs to Ofcom – negligible as it already has an information gathering power</p>	<p>Not quantifiable. However, a regime that facilitates reporting obligations can provide a number of benefits, including:</p> <ul style="list-style-type: none"> - assurance that Ofcom can monitor and enforce firms' obligations - assurance regarding future competitiveness of the market - swift resolution of disputes and investigations
	<p>Article 16 – market analysis procedure</p> <p>Ofcom will be required to conduct market reviews every 3 years rather than every 4-5 years.</p>	<p>Costs to industry of responding to more market reviews - £1.6 million - £10.6 million per year</p> <p>Costs to Ofcom of conducting more market reviews - £187,000 - £1.3 million per year</p>	<p>Not possible to quantify. Potential benefits include greater certainty in terms of forecasting trends, usage patterns of electronic communications and technological developments.</p> <p>Given the current divergence within the EU on timescales for concluding market reviews, these changes may ensure more regulatory consistency within the EU market and will potentially reduce barriers within the internal market.</p>
	<p>Article 9 – spectrum provisions</p>	<p>One-off implementation costs – negligible.</p>	<p>Facilitating spectrum leasing is estimated to result in one-off savings</p>

²⁸ Public Accounts Committee, <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmpubacc/688/68804.htm>

			for Ofcom of between £210,000 and £450,000 and annual savings of £100,000 per year .
	<p>Article 12 - infrastructure sharing (preferred option)</p> <p>Ofcom will have a power to gather information on the location of infrastructure on an ad-hoc basis</p>	<p>Costs to industry - £300,000 per year to provide information, though costs are heavily dependent on the number of information requests</p> <p>Costs to Ofcom – one-off cost of £190,000 - £333,000 (depending on implementation method) and subsequent ongoing cost of £37,500 per year</p>	<p>Not possible to quantify at this stage given existing developments and measures. However, if preferred option even contributes 0.1% to superfast broadband access, the economic benefit could be worth around £18 million.</p>
	<p>Articles 13a and 13b – security and resilience (preferred option)</p> <p>Ofcom and communication providers must comply relevant measures on risk management, guarantee of integrity, notification of security breaches and implementation enforcement</p>	<p>Costs to industry – around £55,000 per year to respond to an investigation and complete a security audit.</p> <p>Costs to Ofcom – around £141,000 per year to manage and respond to breach notification, conduct investigations and produce annual report. Costs also include background resourcing requirements.</p>	<p>Communication providers are largely already compliant so benefits are not expected to be significant. Possible that risk management within the sector will be improved and better harmonised.</p>
	<p>Article 20 – dispute resolution (preferred option)</p> <p>Scope of parties with access to dispute resolution may increase. Ofcom will be given the power to recover dispute costs where necessary.</p>	<p>Costs to industry – up to £420,000 per year. Framework Directive increases the scope for dispute resolution (actual cost will depend on the increased number of disputes).</p>	<p>Benefits to industry – £215,000 £310,000 per year, Access Directive and cost-recovery power likely to reduce the number of disputes.</p> <p>Incentive structure is re-aligned, as the costs of disputes fall to the parties involved rather than industry as a whole (i.e. cost internalised rather than subsidised).</p> <p>Potential benefit of Ofcom devoting more resources and attention to disputes with significant consumer and competition issues at stake could be significantly higher than burdens quantified above.</p>
	<p>Wider impacts of the Framework Directive</p>		<p>Whilst it is not possible to robustly quantify the wider impacts of the Framework, they could potentially be an order of magnitude greater than the costs and benefits outlined above. An improvement in the UK's regulatory framework – e.g. more efficient and effective dispute resolution process - could increase investment by tens of millions of pounds.</p> <p>Similar benefits could arise if the Framework improves the regulatory regime in other countries, bringing a degree of regulatory certainty closer to the UK model. For example a 1 per cent increase in UK telecommunication exports to the EU would bring benefits of around £18 million per year.</p>
e-Privacy Directive	<p>Article 4 – security of processing</p> <p>Communication providers must notify ICO of breaches in data security and possibly the individual affected. ICO will also be given audit powers.</p>	<p>Costs to communication providers of data breach notification and audits - £240,000 - £ 2 million per year</p> <p>Costs to ICO of notification, audits and producing guidance - negligible</p>	<p>Not quantifiable as it is not possible to forecast the potential fall in data breaches (or what impact this will have).</p> <p>However, communication providers have an extra incentive to ensure security measures are robust. If it leads to a 0.1% fall in the annual cost of identity theft or online scams would benefit consumers £1.4 million-£1.7 million per year.</p>
	<p>Article 15(1b)</p>	<p>Costs to communication providers of</p>	<p>Information can be used by security</p>

	<p>Communications providers must have internal procedures to respond requests for data from police or security services. ICO will be able to request information on the procedures.</p>	<p>implementing internal procedures to respond to information requests – up to £150,000 per year</p> <p>Costs to ICO - negligible</p>	<p>services and the police to enhance the protection of UK citizens. Not possible to estimate the extent to which this will occur.</p>
	<p>Article 5 – confidentiality of communications (preferred option)</p> <p>Industry self-regulation to ensure that consumers can give consent to storing and access of internet cookies on their computer</p>	<p>Firms active in behavioural advertising and web-analytics will incur costs to provide more information to consumers (e.g. testing and standardisation).</p> <p>Browser vendors will incur costs to reprogram browsers and provide enhanced settings. They will also incur costs to communicate the settings and technologies to web developers and third parties.</p> <p>Consumers will need time to read information.</p> <p>Self-regulatory so no enforcement cost to ICO</p>	<p>Majority of 40 million internet users will feel more secure and perform more transactions on the web. The consumer benefits of being fully informed about the nature and options regarding internet cookies are in the order of £300 million - £380 million per year, though it is not yet possible to indicate what proportion of this will materialise in practice.</p>
	<p>Article 15a (preferred option)</p> <p>ICO can request information from third parties with regards to regulatory breaches. ICO's sanctioning powers under PECR will be enhanced by giving it a civil penalty power of £500,000</p>	<p>Provision of information from third party communication providers will cost - £80,000 – £150,000 per year</p> <p>Costs to ICO - negligible</p>	<p>More than 40,000 complaints are made per year about the telephone preference service (an opt-out of unsolicited marketing calls). Actual number of consumers affected (but don't complain) likely to be much higher.</p> <p>ICO is currently unable to investigate around 40% of complaints due to insufficient information. Co-operating with third party communication providers should help to reduce consumer detriment.</p> <p>Tens of thousands of complaints received about direct marketing firms even though ICO has taken enforcement action against the firm. Civil penalty powers should act as a more effective deterrent and reduce consumer detriment.</p>
Authorisation Directive	<p>Article 10 – compliance with general authorisations and rights of use</p> <p>Strengthening of Ofcom's enforcement powers</p>	<p>Costs to industry – not quantifiable as implementation details are not yet known. Ofcom will consult on revisions to enforcement guidelines, after which costs will become clear. Fully compliant firms will bear negligible costs though.</p> <p>Costs to Ofcom – negligible</p>	<p>Indicative estimate of consumer detriment in the telecommunications sector is £4.2 million per year. Ensuring that fewer companies breach their obligations should result in a reduction to this detriment.</p> <p>In the wider context, strengthening enforcement and regulatory compliance in other countries may also increase incentives for UK communication providers to export their services in the EU.</p>
	<p>Article 10(1) - information gathering and spectrum</p> <p>Ofcom given a power to request information on spectrum-related functions</p>	<p>Costs to industry of responding to information requests - £78,000 per year</p> <p>Costs to Ofcom - negligible</p>	<p>Not possible to quantify. Ofcom receive more than 5,000 spectrum complaints per month. Illegal broadcasting is estimated to affect radio quality for 2 million adults on a weekly basis.</p> <p>The size of the problem is therefore likely to be much greater than the quantified cost to industry. If additional information leads to more effective enforcement, the benefits could be significant.</p>
	<p>Articles 10 and 11 – dissuasive sanctions</p>	<p>Costs to industry – no cost if firms are compliant with their regulatory</p>	<p>Increased penalty will act as a deterrent for firms to comply with their</p>

	(preferred option) Ofcom can impose a penalty of up to £2 million if firms breach their obligations to provide information	obligations Costs to Ofcom - negligible	obligations, as currently not all communication providers are 100% compliant. This should reduce the level of consumer detriment in the market.
Universal Service Directive	Article 23a (1) Ensuring equivalence in access and choice for disabled end-users. Ofcom given the power to specify, where appropriate, measures that undertakings will have to take to ensure equivalence.	As part of the requirement to ensure equivalence Ofcom proposes to mandate the provision of an emergency SMS service, with one-off capital costs of £80,000 and ongoing costs of £71,500 per year.	Benefits of ensuring equivalence for users and society are not quantifiable.
	Article 23a (2) – Ensuring the availability of terminal equipment The Government intends to apply this provision through the e-accessability forum.	Minimal costs, as the forum has already been set up.	Enhanced opportunities for business and engagement of disabled users in the wider economy, which is not possible to quantify.

Specific Impact Tests

Competition

The impacts on competition are addressed in the Directive and topic-specific impact assessments.

Small Firms

The impacts on small firms are addressed in the Directive and topic-specific impact assessments.

Other Specific Impact Tests

Other environment/ rural proofing

After an initial screening it has been deemed that no significant impact is anticipated on the environment and rural proofing.

Statutory Equality Duties

The Equality Impact Assessment provides an assessment on these issues.

Other tests

Other specific impact tests have been considered including Legal Aid, Sustainable Development and Carbon Assessment. Again, after initial screening, it has been deemed that no significant impact is anticipated.

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p>Basis of the review: [The basis of the review could be statutory (forming part of the legislation), i.e. a sunset clause or a duty to review, or there could be a political commitment to review (PIR)];</p> <p>As this legislation implements European law, it is not subject to the Government's new sunset obligations. However, it is subject to a mandatory 5 year review of regulation. The Directives of the Framework have review provisions in them which say that the Commission shall periodically review the functioning of the Directive and report to the European Parliament and the Council. The first review of the Framework was required to be within 3 years of implementation, and it is from this review that the amended Framework has been negotiated. The UK will be required to provide the Commission with information when they perform a review and will carry out its own review of implementation at this that time. The PIR would be expected to take place within the standard 3 – 5 year timeframe, by May 2016: the timing of such a review, and the nature of the review itself, would also be influenced by the Commission's intentions.</p>
<p>Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]</p> <p>The objective is to review the effective implementation of the provisions of the amended EU Electronic Communications Framework. The Framework is intended to raise standards of regulation and competition across all 27 European Member State communication markets.</p>
<p>Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]</p> <p>The UK Government will review the implementation of the Framework at the same time as it is required to provide information to the Commission for their review. This method of review is chosen so as to avoid an unnecessary burden on the Government, Stakeholders or Ofcom. The form that the review will take is not yet known.</p>
<p>Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]</p> <p>The review will use the do nothing or 'no change' options detailed in the Impact Assessment as a baseline against which the change introduced by the legislation can be measured.</p>
<p>Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]</p> <p>The review will assess the effective implementation of the provisions of the revised EU Electronic Communication Framework that were not previously covered under existing legislation. The review will evaluate whether the provisions have been transposed in such a way as to deliver the main aims of the revised Framework to UK users and businesses. The main aim is to raise standards of regulation and competition across all Member States.</p>
<p>Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection of monitoring information for future policy review]</p> <p>Under the revised Framework, Ofcom, the National Regulatory Authority, is required to carry out a review of the markets that are considered to have aspects of Significant Market Power every three years. These reviews will be able to provide information for the review because they will assess the state of competition within the markets, which will give an idea of whether the provisions of the Framework are achieving their aim of increasing competition and investment. In addition, the Government plans to have ongoing engagement with stakeholders over the implementation and effects of the provisions.</p>
<p>Reasons for not planning a review: [If there is no plan to do a PIR please provide reasons here]</p> <p>Not Applicable</p>

Annex 2: Summary of the Review of the EU Regulatory Framework¹

The EU regulatory framework for telecommunications was created in the 1990s to open up national markets to competition, which until then had been dominated by state-owned monopolies. This process culminated in the liberalisation of national markets in 1998 and a further step was taken in 2002 with the adoption of the current set of rules, which take account of the convergence of technologies and apply to all forms of 'electronic communications'. The regulatory model under the 2002 framework relies on implementation of a common set of EU rules by different national regulatory authorities (NRAs) to which responsibility for overseeing markets has been entrusted. The Framework also introduced the competition law concept of dominance as the threshold for 'ex-ante' regulation, to ensure that regulation is imposed only on firms with significant market power.

In 2006 and 2007, the Commission reviewed the functioning of the EU framework against its main objectives, which are to promote competition, to consolidate the internal market and to promote the interests of the citizen. In the light of technological and market developments, especially improved competition in some areas, but also continued dominance by one or a few operators on a number of key markets as well as a continued lack of a single market for electronic communications and increasing divergence of regulatory approaches in the enlarged EU, a substantial reform of the regulatory framework was considered necessary by the Commission. The 2007 Reform Proposals of the Commission can be grouped under the three pillars of better regulation, completing the single market and connecting with citizens.

Better regulation for competitive electronic communications

One of the Commission's specific objectives is to simplify and improve the quality of the regulatory environment, by reducing ex-ante regulation where market developments allow and by simplifying the market review procedure. In addition, better regulation of radio spectrum — by simplifying access to and use of this scarce resource and moving to a more market-oriented allocation of spectrum — will improve competition in wireless services and release the economic potential of spectrum.

Following a period of public consultation and review, the Commission recommended the following proposals:

- **Deregulation of the sector** - the Commission revised its Recommendation on relevant markets to phase out ex-ante regulation² and the list of markets was reduced from 18 to 7 markets (see impact assessment for the Framework Directive for further detail). Oversight of markets where competition is not yet effective is expected to intensify and markets that are crucial for Europe's competitiveness will be carefully monitored, in particular markets associated with the delivery of broadband access.
- **Market review procedures** - the legislative proposals allow for the notification requirements in the system of market reviews to be simplified.
- **Functional separation** - NRAs provided with the additional remedy of functional separation, i.e. forced separation of activities without divestiture of assets, as an exceptional remedy subject to Commission oversight.
- **Access to and use of spectrum** - the Commission's legislative proposals strengthened the principles of technology and service neutrality, and created a mechanism to designate certain bands where, across the EU, rights acquired to use spectrum are allowed to be traded (secondary trading). Regulatory provisions to encourage licence-free spectrum use and to reinforce the coordination of conditions for spectrum authorisations were also proposed. The proposals took into account the policy objective to achieve economies of scale, but also the need

¹ This Annex is drawn from the European Commission document, "Report on the outcome of the Review of the EU regulatory framework for electronic communications networks and services: Summary of the 2007 Reform Proposals"

² *Ex ante* regulation is distinct from *ex post* regulation; the former is anticipatory and mainly concerned with market structure (e.g. levels of market concentration, entry conditions, product differentiation), whilst *ex post* regulation addresses specific allegations of anti-competitive behaviour or market abuse and aims to redress proven misconduct through a range of enforcement options, including fines, injunctions or bans. It is therefore mainly concerned with market conduct.

to avoid harmful interference and the achievement of general interest objectives such as social and regional cohesion, ensuring safety of life, avoiding inefficient spectrum use, and promoting cultural and linguistic diversity and media pluralism.

Completing the single market in electronic communications

Under the previous set of rules, NRAs exercised considerable discretion in implementing the regulatory framework but their perspective remained largely confined to national borders, despite the efforts made to improve coordination via the European Regulators Group (ERG), a forum bringing together national regulators. This has led to regulatory inconsistency and distortions of competition, hindering the development of a single European market in which undertakings can operate seamlessly across borders and where private and business consumers can profit from the availability of comparable communications services independently of geographic location. The Commission therefore proposed the establishment of an independent European Electronic Communications Market Authority, in order to build on the combined expertise of NRAs and improve the existing coordination mechanisms. At the same time, it proposed to strengthen the independence and enforcement powers of national authorities. This will ensure consistent implementation of (de-)regulation across the EU, under the supervision of the Commission, and a level playing field for operators in the single market.

Specifically, the Commission recommended the following proposals:

- **Strengthen the independence and enforcement powers of national authorities** - to improve the effective and speedy implementation of the regulatory framework.
- **European Electronic Communications Market Authority** - it was proposed to establish an independent European Electronic Communications Market Authority, bringing together the NRAs currently meeting within the ERG. The intention was to advise the Commission, have a clear mandate to act in furtherance of the single market, and be accountable to the European Parliament. The new Authority would thus replace loose cooperation among NRAs inside the ERG by a more efficient, more authoritative and more accountable system.
- **Strengthen the Commission's oversight on remedies** - the legislative proposals extended the Commission's power under the market review procedure to oversee remedies proposed by NRAs, in close cooperation with the new European Authority, with a view to contributing to a more consistent, efficient and speedy application of remedies across the EU.
- **Technical harmonisation** - in order to reduce divergence in the implementation of the regulatory framework, the Commission, drawing upon the expertise of the Authority, will be able to adopt technical harmonisation measures in areas such as costing methodologies, implementation of number portability, consumer protection, and accessibility to electronic communication services and equipment for end-users with disabilities.

Completing the single market in electronic communications

In a rapidly changing market environment, new measures are needed in order to preserve and enhance consumer protection and user rights and ensure that consumers can reap the full benefits of a dynamic and increasingly borderless communications market. The Commission proposals aimed in particular to strengthen security and privacy, to make number portability speedier and more efficient, and to promote a high quality of service and unobstructed access to digital and online content. The reform proposals also ensured that users with disabilities, elderly users and people with special needs have better access to electronic communications services.

- **Consumer protection** - The legislative proposals included:
 - Improving the transparency of information from service providers to consumers, including information on supply conditions and on tariffs.
 - Setting a time limit of one working day for 'porting' (transferring) a telephone number following a change of fixed or mobile operator.
 - Enhancing the implementation of '112' emergency services in the EU, in particular by ensuring more efficient access to caller location information.

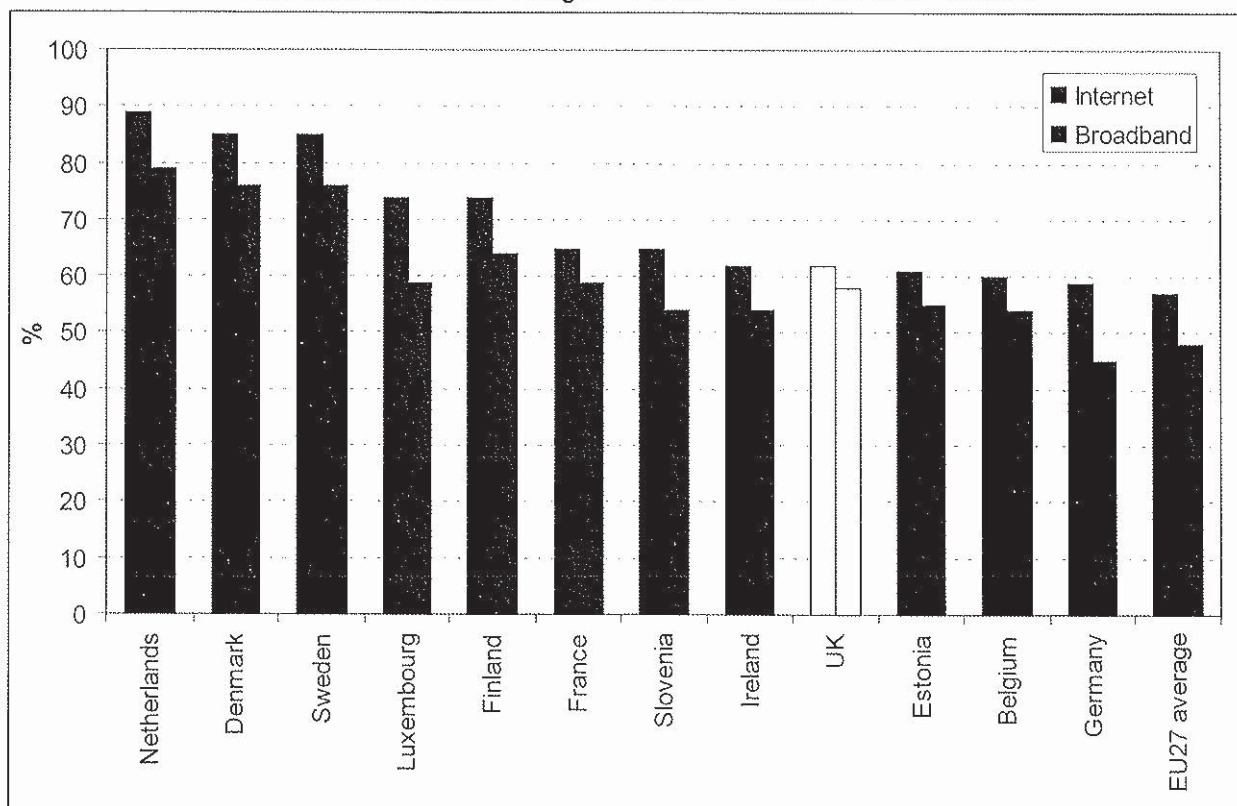
- Enabling NRAs to impose minimum requirements for the quality of services based on standards drawn up at Community level.
- **eAccessibility and the rights of users with disabilities** -The legislative proposals included:
 - Facilitating access by users with disabilities to 112 emergency services
 - Strengthening the existing provisions to ensure that users with disabilities, elderly users and people with special needs are not prevented from using and accessing eCommunications services.
- **Security of networks and services and user privacy** - The Commission's legislative proposals address a range of issues, included:
 - Ensuring that consumers are informed if their personal data have been compromised as a result of a breach of network security;
 - Giving operators and NRAs more responsibility with respect to the security and integrity of all electronic communications networks and services;
 - Strengthening implementation and enforcement powers for competent authorities, in particular in the fight against 'spam';
 - Clarifying the application of the EU rules to data collection and identification devices using public electronic communications networks.

Annex 3: Electronic Communications in the UK and international comparisons

Market

The performance of the UK's electronic communications sector measures up strongly compared to its international counterparts. In terms of retail revenue, the UK has the third largest sector in Europe at £39 billion³, behind Germany (£52 billion) and France (£44 billion). Furthermore, it has complete coverage for fixed and mobile telephone and broadband services, such that any household can access each form of electronic communication. In terms of household take up, only one per cent of UK households do *not* have access to at least one telephone (fixed and/or mobile), whilst the EU27 average is two per cent⁴. With regards to internet connections, Chart A1 shows that UK take-up is above the EU average at 62 per cent, although it is significantly below the likes of the Netherlands, Denmark and Sweden. A similar scenario has developed for household access to internet broadband.

Chart A1: Households having an Internet and Broadband connection



Source: Eurobarometer (fieldwork carried out in November-December 2009)

Competition

Under section 3(1) of the 2003 Communications Act, Ofcom is required to "further the interests of consumers in relevant markets, where appropriate by promoting competition". One of the objectives is to achieve greater static efficiency in the market, which can be broken down into productive efficiency (when the costs of production are minimised for a given level of output) and allocative efficiency, which is when prices are close to cost. However, a competitive market should also deliver choice and diversity to the market, therefore Ofcom has a number of tools at its disposal to foster and promote competition⁵.

One indicator of the competitiveness of the UK sector is illustrated in Chart A2, which shows the weighted average pricing of five baskets of communication services in the UK and five other comparative countries. Overall, prices in the UK compare favourably to its competitors, offering the lowest prices for

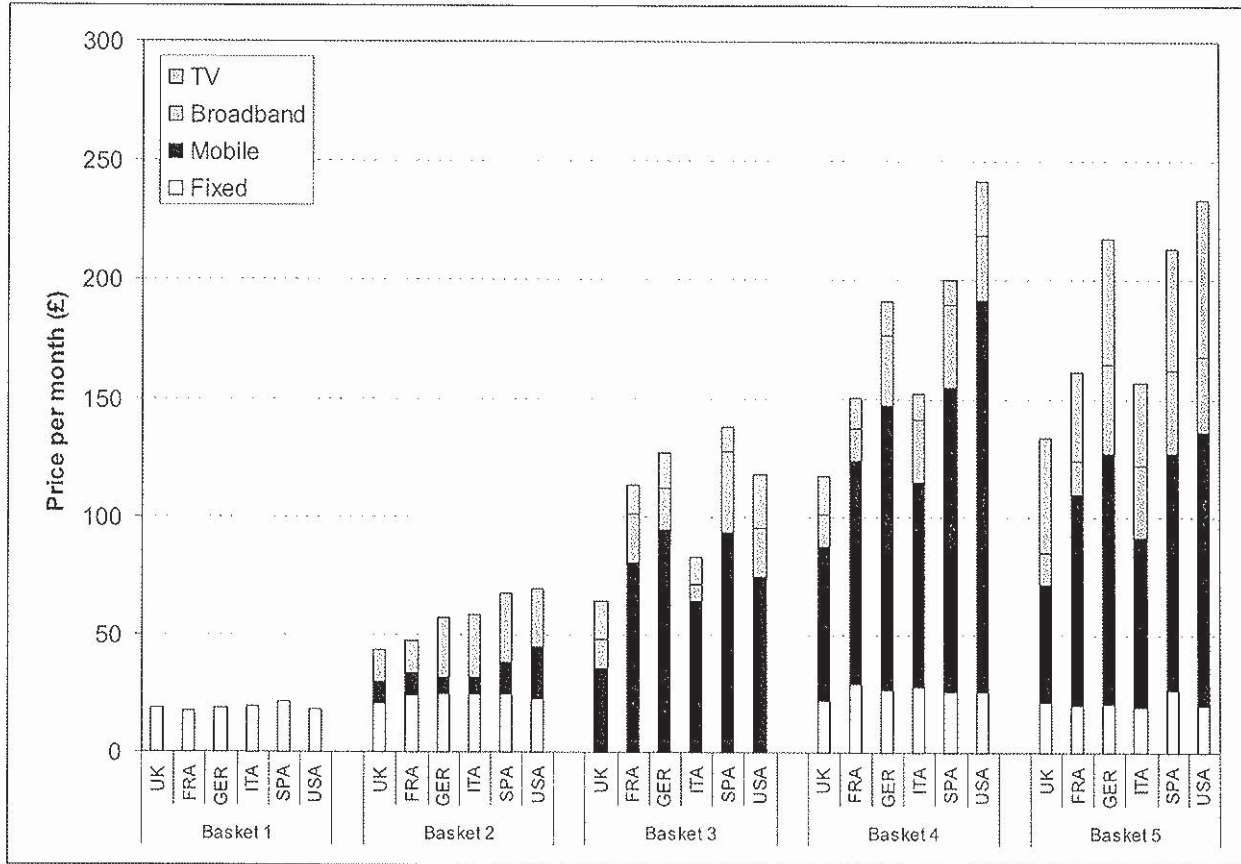
³ This includes revenue from telecommunications, television and radio. It does not include wholesale revenues and so is less than the figure of £50 billion in the main evidence base.

⁴ Eurobarometer, 'E-Communications Household Survey Report' (October 2010)

⁵ For further detail, see Ofcom, 'Final statements on the Strategic Review of Telecommunications' (September 2005)

four of the five baskets – this is driven particularly by low mobile prices, which could be due to the relatively low level of market concentration. The UK had the second least concentrated mobile market at the end of 2009, as measured by the Herfindahl-Hirschman Index of market concentration (HHI), with no single operator having a connection share of more than 30%⁶. However, it should be noted that this index will have increased in 2010 due to the merger of the UK operations of Orange and T-Mobile into Everything Everywhere.

Chart A2: Comparative 'weighted average' pricing of 'single services' for six countries



Source: Ofcom using data supplied by Teligen. Weighted average prices are the best-value tariffs from each of the three largest operators by market share in each country. Note 'single-service' broadband in Spain and Germany includes the best value 'voice and broadband' tariff as single-service broadband was not available from the largest operators. PPP adjusted.

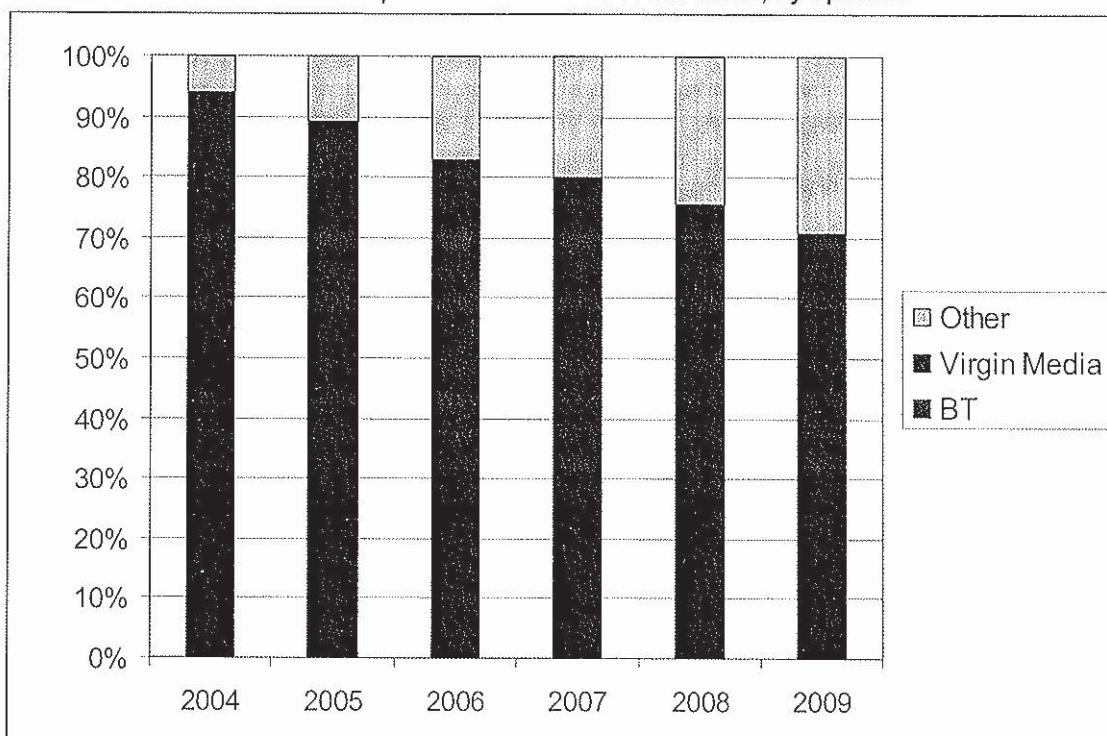
In terms of consumer choice and the range of operators available, as discussed above the UK has more than 600 providers that offer some type of electronic communication. With regards to fixed line operators, the UK has the fourth largest number of providers in the EU, behind the Netherlands, Poland and Austria. The majority of countries have 3-4 cellular mobile network operators (the UK has four) whilst the UK has more MVNOs than most countries (again with the exception of the Netherlands).

It is also important that consumers are sufficiently engaged in the market, such that they are aware of a variety of suppliers and their products. Spontaneous awareness of a variety of fixed line suppliers has recently dropped slightly (from 49 per cent in 2009 to 45 per cent in 2010) whilst the proportion for mobile and broadband suppliers has remained fairly constant at around three quarters and 70 per cent respectively for the past three years⁷. Given the nature of the market and the economies of scale that exist, certain firms have significant market shares for each type of communication and therefore many consumers will mostly be aware of the larger providers. In the case of fixed telephone services, BT remains the biggest supplier but – as Chart A3 below shows – its share of fixed-line connections has been continually declining during the past six years at the expense of smaller operators, illustrating the effect of increased competition.

⁶ The HHI scale ranges from 0 (for a hypothetical perfectly competitive market) to 10,000 (for a monopoly). The UK index was 1,794 at the end of 2009, second only to India at 1,552. The respective indices for France, Germany and the US were 3,261, 2,843 and 2,260. China was the largest at 5,335.

⁷ Ofcom, 'The Consumer Experience' (December 2010)

Chart A3: Proportion of fixed-line connections, by operator



Source: Ofcom, Communications Market Report 2010

With regards to mobile phone services, the four network operators in the UK are Vodafone, O2, Everything Everywhere (following the merger in 2010 between the European owners of Orange and T-Mobile UK) and 3UK. Between them, these firms had just over 80 million subscriptions in the UK in 2009; 3UK had the smallest share at 6 per cent whilst Vodafone and O2 made up 23 per cent and 28 per cent respectively of the market. However, within this market there are a number of MVNOs that are active and offer consumers greater choice (for example Tesco Mobile resells mobile services that it purchases on a wholesale basis from O2). In 2009, 13 per cent of total mobile connections were made by MVNOs, which is an increase of three percentage points from 2004. With the exception of Germany (where MVNOs account for almost a quarter of mobile connections), this is the highest share in Europe and also compares favourably to other countries such as the US and Japan⁸.

Lastly, in terms of internet access, although the number of providers is greater than for both fixed and mobile phone, the market has become increasingly concentrated during the past five years. Research by Ofcom shows that the retail connection share of the top three broadband providers (BT, TalkTalk and Virgin Media in the UK) was 72 per cent in 2009, compared to 47 per cent in 2004. This compares favourably with some countries, such as France (91 per cent), Spain (82 per cent) and the Netherlands (78 per cent) but it is larger than some counterparts such as Poland (63 per cent)⁹. In the UK, the increase was largely a result of a series of mergers and acquisitions (e.g. the acquisition of AOL Broadband and Tiscali by TalkTalk) as well as the increasing popularity of bundled services – for example the household take-up of fixed voice and broadband services increased from 9 per cent in Q1 2005 to 22 per cent in Q1 2010, whilst take-up of fixed voice, broadband and multichannel TV increased from 3 per cent to 17 per cent over the same period. However, whilst the bundling of communication services may contribute to increases in market concentration, it nevertheless offers significant benefits to consumers, such as value for money (52 per cent of consumers using bundled services indicated that it was cheaper to do so) and the convenience of dealing with one supplier¹⁰.

The level of consumer switching between communications providers is also an indicator of effectively operating competition. Recent research by Ofcom, illustrated in Chart A4 below, shows that the UK compares well with France and Germany and has a significantly higher switching rate than the US and

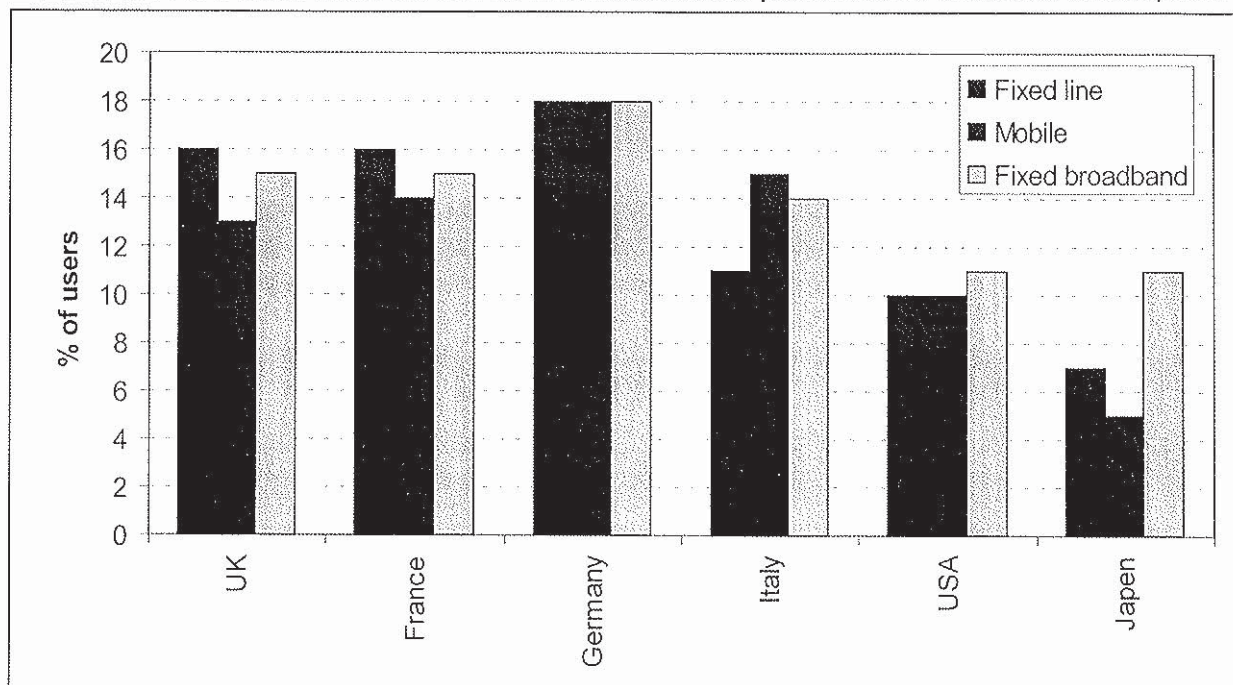
⁸ Ofcom, 'International Communications Market Report' (December 2010)

⁹ Ofcom, 'International Communications Market Report' (December 2010)

¹⁰ Ofcom, 'Communications Market Report' (2010)

Japan¹¹. However, within this context, it should be emphasised that it is not necessary to achieve a switching rate of 100% to have a well-functioning market. As long as consumers have a credible threat of switching provider, this should be sufficient to discipline existing providers. This is illustrated by the fact that the majority of electronic communications users in the UK are satisfied with their services, for example around 78 per cent are either very or fairly satisfied with ease of use, whilst 69 per cent are satisfied with the cost (both of these are higher than the EU averages)¹². Satisfaction with the overall service of communications suppliers ranged from 80 to 90 per cent for fixed line, mobile, broadband and television in 2010¹³.

Chart A4: Proportion of users of a service who have switched provider in the last twelve months, 2010



Source: Ofcom, 'International Communications Market Report 2010' (December 2010)

UK Regulatory Framework

Evidence suggests that UK regulation of its electronic communications market is effective in comparison to other countries. The European Competitive Telecommunications Association (ECTA) publishes an annual regulatory scorecard, which compares the regulatory environment of the electronic communications sector in 22 European countries and its effectiveness in promoting the objectives of the EU regulatory framework. The scope of the survey includes the wider institutional and legislative environment affecting the sector as well as the application of regulation by National Regulatory Authorities (NRAs) and the market outcomes in key wholesale access and retail markets. In its most recent report, ECTA listed the UK as one of the leading countries that performed well across all five sections (the overall institutional environment, key enablers for market entry, the NRA's regulatory processes, application of regulation by the NRA and regulatory and market outcomes). Overall, it ranked second in the 2009 scorecard behind the Netherlands, having come first in all previous scorecards¹⁴.

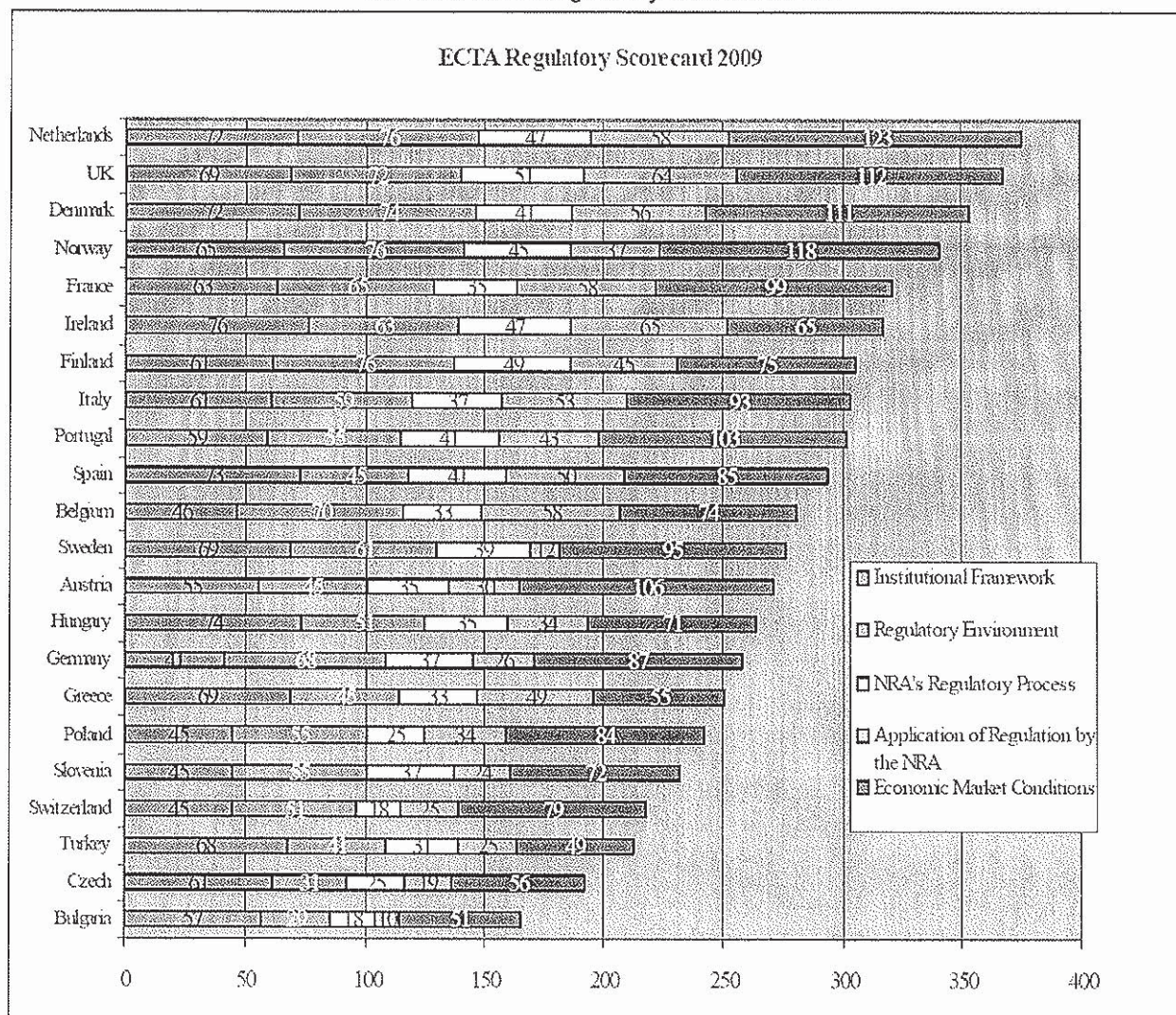
¹¹ Evidence from Eurobarometer also shows that the UK has one of the highest switching rates in the EU for the Internet. 12 per cent of respondents indicated that they had switched ISP at some point, with only three other countries having higher rates (Denmark at 22%, Sweden at 15% and Finland at 13%)

¹² Eurobarometer, 'E-Communications Household Survey Report' (October 2010)

¹³ Ofcom, 'The Consumer Experience' (December 2010)

¹⁴ For further details, see <http://www.ectaportal.com/en/REPORTS/Regulatory-Scorecards/Regulatory-Scorecard-2009/>

Chart A5: ECTA Regulatory Scorecard 2009

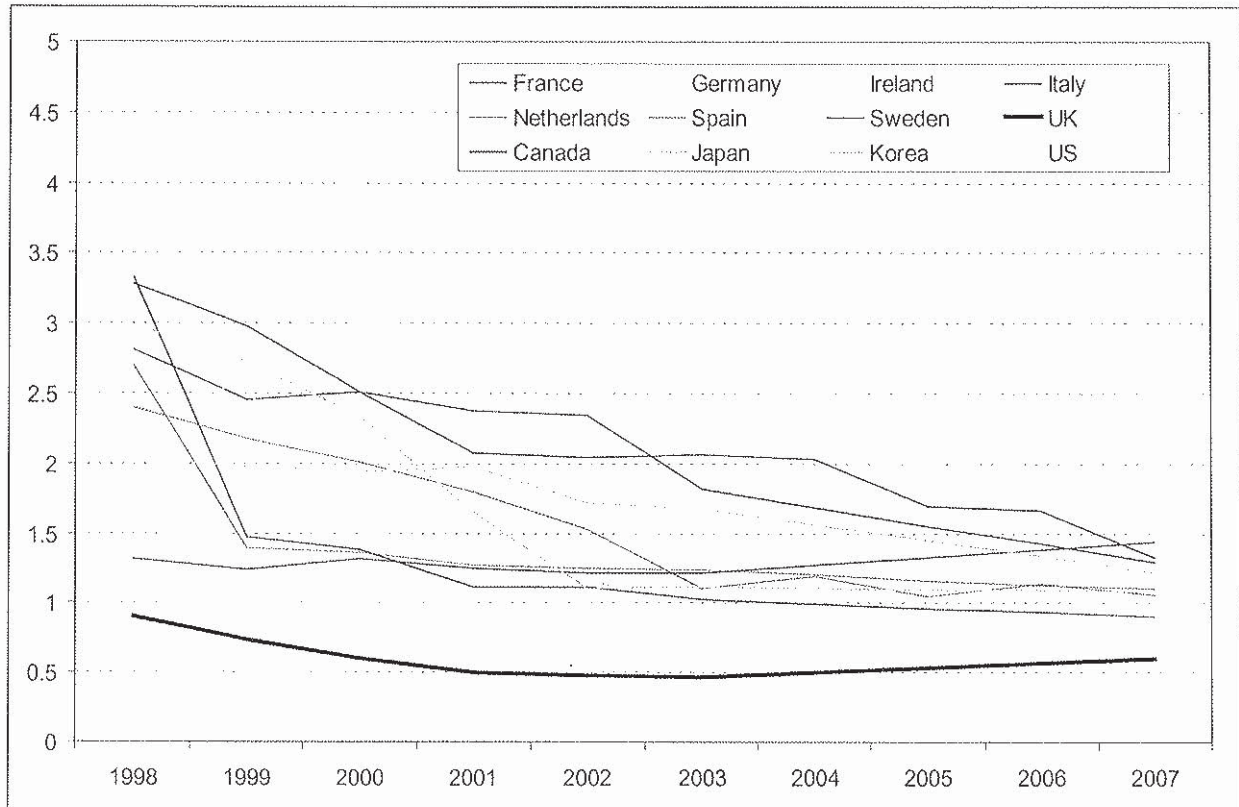


Source: ECTA Regulatory Scorecard 2009

In addition, the OECD produces annual indicators of regulation in energy, transport and communications that summarise regulatory provisions in seven sectors, including telecommunications. In the latest data for 2007, the UK achieved the best possible score for entry regulation and public ownership (i.e. no government ownership in the sector and all potential entrants are free to enter the market) and its overall score was second only to the US¹⁵. Chart A6 shows how the UK has performed in relation to its counterparts over a ten year period – the fact that the UK's score in 1998 was lower than most other European countries in 2007 suggests that it led the way on regulatory reform and that a significant portion of the EU's regulation was more relevant to other countries that were lagging behind.

¹⁵ For further details on these indicators, see <http://www.oecd.org/dataoecd/62/19/44754663.pdf?contentId=44754664>

Chart A6: OECD Regulatory Reform Index for the Telecoms Sector



Source: OECD. The composition of the sectoral indicator for telecoms is based on the response to three types of questions: (1) The extent to which there is free entry into the market (from a regulatory perspective); (2) The extent to which the largest firms in the fixed and mobile sectors are owned by the Government; and (3) The market structure, based on market shares of new entrants. Scores are normalised to be between 0 and 6, such that a lower number represents a regulatory regime with fewer impediments.

Investment and innovation

The EU Framework requires NRAs to promote efficient investment and innovation in new and enhanced infrastructures¹⁶. The main drivers of investment for any business are the level of expected returns and the degree of risk and uncertainty associated with those returns. A company will only choose to invest in a particular project if the expected returns to be made outweigh the costs involved. The higher and more certain the expected future returns are likely to be, the more willing the firm will be to invest in that project. In the electronic communications industry, investment in infrastructure is both costly and risky. The upgrade and maintenance of existing networks tend to involve significant levels of capital expenditure while investment in new infrastructure (such as next generation super-fast broadband) involve high levels of risk because of the significant uncertainties surrounding future revenue streams. This means that services providers, and especially network operators, require assurances of a higher return on investment on account of the greater degree of risk that they face compared to companies operating in other sectors of the economy.

Furthermore, when regulating electronic communications, there may be trade-offs between maximising static and dynamic efficiency (the latter being achieved when firms have the correct incentives to invest and innovate). For example, there may be dynamic benefits from innovation of network infrastructure being duplicated, although this would increase overall costs and reduce static efficiency. Alternatively, a high level of infrastructure sharing may lead to allocative efficiency but it could act as a barrier to network investment and innovation. Therefore, the optimal model of competition and investment will depend on specific circumstances and it is important to understand the parts of a network where the costs of duplication are unlikely to be offset by the dynamic benefits of competition¹⁷.

¹⁶ Article 8(2) of the Framework Directive

¹⁷ A further discussion on regulation and investment can be found in Friederiszick and Grajek, 'Analyzing the Relationship between Regulation and investment in the Telecom Sector' (2008). The study found that tough entry regulation in the telecommunications sector in Europe discourages investment in the fixed-line sector but had no significant impact on investment on mobile telephony.

Tables A1 and A2 below highlight trends in investment in the telecommunications sector across the 27 EU countries during an eleven year period (it should be noted that this does not include electronic communications related to broadcasting). It shows that the British regulatory environment has been effective in fostering investment, as the UK has invested more than every other country each year. Compared to the late 1990s/early 2000s, investment rates are not as high in countries with advanced telecommunication industries such as the UK, France, Italy Spain and Germany (see Table 3). By contrast, they are higher in some countries that have recently joined the EU, such as Latvia, Slovakia and Romania.

Table A1: Gross Investment in Tangible Goods in the Telecommunications Sector (Million Eur)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	838	1,438	1,729	1,617	:	1,725	655	1,942	942	921	:
Bulgaria	:	:	129	316	:	334	322	:	336	419	283
Czech Republic	:	:	:	:	837	448	400	:	:	:	431
Denmark	707	700	678	:	:	:	:	440	516	664	917
Germany	:	:	14,469	7,769	5,746	4,653	6,267	5,269	6,098	5,661	5,724
Estonia	:	:	:	:	:	50	45	50	82	99	92
Ireland	:	:	:	:	:	:	:	:	:	723	:
Greece	:	1,452	1,727	:	:	948	744	1,083	793	787	:
Spain	1,006	4,243	6,405	5,631	4,005	2,759	3,232	3,890	3,470	3,560	4,089
France	:	:	:	6,976	6,273	4,088	4,471	4,676	4,953	5,363	:
Italy	5,301	4,816	5,455	6,183	5,719	5,000	4,658	5,423	4,668	4,731	4,929
Cyprus	72	67	76	72	:	71	149	130	103	92	94
Latvia	150	142	:	162	164	94	77	102	120	156	154
Lithuania	:	:	181	179	167	88	86	88	107	147	118
Luxembourg	173	:	:	:	:	83	45	:	:	:	:
Hungary	:	648	848	790	638	485	620	598	529	517	592
Malta	:	:	:	:	:	:	:	:	:	:	:
Netherlands	:	:	:	:	:	:	1,568	1,978	2,032	1,548	1,965
Austria	1,156	1,563	2,033	1,261	1,021	852	843	694	822	957	985
Poland	:	:	:	:	:	:	:	:	:	:	1,701
Portugal	1,619	1,647	1,595	1,601	1,300	593	:	823	889	1,000	1,338
Romania	1,771	1,398	:	1,801	633	492	708	4,128	1,964	:	:
Slovenia	:	274	283	186	201	175	:	:	:	290	353
Slovakia	410	232	:	213	267	230	294	253	305	388	430
Finland	677	755	1,093	882	873	1083	498	451	440	655	:
Sweden	:	:	2,251	1,903	:	1,797	1,578	1,189	909	1,229	998
UK	11,611	14,063	18,103	12,421	12,470	9,337	10,274	10,148	11,822	10,508	8,930

Source: Structural Business Statistics, Eurostat. Unavailable data is marked by :

Table A2: Investment Rates (Investment as a % of Value Added at Factor Cost)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	25	38	42	39	:	32	11	31	15	14	:
Bulgaria	:	:	:	46	:	45	37	:	40	44	28
Czech Republic	:	:	:	:	41	22	20	:	:	:	15
Denmark	32	30	32	:	:	:	:	17	19	24	33
Germany	:	:	77	36	21	15	16	16	17	17	18
Estonia	:	:	:	:	:	22	19	20	30	33	29
Ireland	:	:	:	:	:	:	:	:	:	33	:
Greece	:	52	55	:	:	27	20	32	23	21	:
Spain	10	57	64	47	29	18	20	23	20	19	22
France	:	:	:	38	29	17	18	19	19	21	:
Italy	34	33	33	33	28	23	20	24	20	22	21
Cyprus	34	25	25	21	:	22	43	36	32	26	25
Latvia	:	59	:	46	46	27	22	29	31	39	38
Lithuania	:	:	68	68	50	29	28	26	28	35	33
Luxembourg	40	:	:	:	:	13	5	:	:	:	:
Hungary	:	:	64	53	36	27	32	28	28	24	27
Malta	:	:	:	:	:	:	:	:	:	:	:

Netherlands	:	:	:	:	:	:	:	24	:	:	24
Austria	49	61	102	46	34	26	28	23	27	32	34
Poland	:	:	:	:	:	:	:	:	:	:	29
Portugal	73	66	63	58	44	19	:	27	29	32	42
Romania	:	:	:	146	54	40	49	222	91	:	:
Slovenia	:	:	194	118	106	43	:	:	:	51	64
Slovakia	:	:	:	47	50	38	43	33	37	42	41
Finland	42	40	58	43	43	50	23	25	22	32	:
Sweden	:	:	50	51	:	53	46	30	21	29	:
UK	48	53	62	40	40	28	31	27	32	28	25

Source: Structural Business Statistics, Eurostat. Unavailable data is marked by :

Research analysing investment in the sector¹⁸ found that the decline in investment in countries such as the UK was due in part to a 'natural reduction' as part of the investment cycle. Following the high levels of spending in earlier years on infrastructure – for example to support 2G mobile telephony, fixed networks (as a result of local loop unbundling) and auctions for 3G mobile telephony licenses - less was needed and firms focused on achieving higher returns with existing capital (which also allowed some firms to deleverage, where they had previously borrowed to finance investment). It is also likely that the collapse of the financial telecoms bubble was a key factor as the availability of credit became more limited, in addition to improvements in technology and digitalisation and increases in competition. By contrast, the increase in investment in new member states was probably indicative of firms viewing them as new market opportunities and seeing an opportunity to upgrade older infrastructure.

However, investment is still of great importance to the electronic communications sector in the UK because in the coming years, both fixed line and mobile network operators will seek to drive growth in data services by offering higher-speed connectivity¹⁹. The growth is a response to increasing demand for bandwidth as a result of services such as iPlayer, Voice over Internet Protocol (VoIP), the emergence of increasingly sophisticated smartphones and a higher take up of mobile broadband for connected laptops, handsets and new wirelessly connected devices (such as e-readers and tablets). In order to respond to demand, investment will be required in areas such as Next Generation Access networks (for example to deliver super fast broadband) and 3G+ and 4G services.

Ultimately, investment will be primarily driven by the expected returns and the associated risk and uncertainty (see Table A3). However, industry-level regulation is one of the key secondary drivers of investment in the electronic communications sector. This is supported by econometric analysis, which shows that a better performing regulatory regime, as measured by the OECD or ECTA index, contributes to higher levels of investment²⁰. A separate analysis also explored the relationship between telecommunications investment and a country's regulatory framework (as measured by the ECTA scorecard). The study calculated an elasticity coefficient which showed that for every 1% increase in regulatory effectiveness, there will be a 0.47% increase in investment²¹.

A survey in 2006 of wholesale and service providers in the electronic communications market provides further evidence of this, as it found that a significant proportion of respondents (from 36 per cent of retail broadcasting to 57 per cent of mobile network providers) believed that the EU regulatory framework had improved incentives to invest whilst a much smaller proportion (from 7 per cent of satellite and cable retailers to 15 per cent of fixed wholesale providers) said that it damaged incentives. The remaining companies indicated that the regulation either had no impact or did not know²².

¹⁸ London Economics in association with PricewaterhouseCoopers, 'An Assessment of the Regulatory Framework for Electronic Communications – Growth and Investment in the EU e-Communications Sector' (July 2006)

¹⁹ Ofcom, 'Communications Market Report' (2010).

²⁰ London Economics (2006)

²¹ SPA Network, 'European Telecom's Lost Investment: An analysis of the ECTA Scorecard' (April 2006)

²² London Economics (2006)

Table A3: Analysis of investment drivers

Primary Drivers	<ul style="list-style-type: none"> • Levels of expected returns • Risk and uncertainty associated with expected returns 		
Secondary Drivers	Economy-wide	Industry-specific	Company-specific
	<ul style="list-style-type: none"> • GDP per capita • Demographic/geographic characteristics • Economic cycle (financial bubble) • General regulation (not sector-specific) 	<ul style="list-style-type: none"> • Regulation (sector-specific) • Competition • Technological process • Demand for e-Communication services 	<ul style="list-style-type: none"> • Cost of capital • Credit rating and debt levels • Take-overs and mergers • Company performance

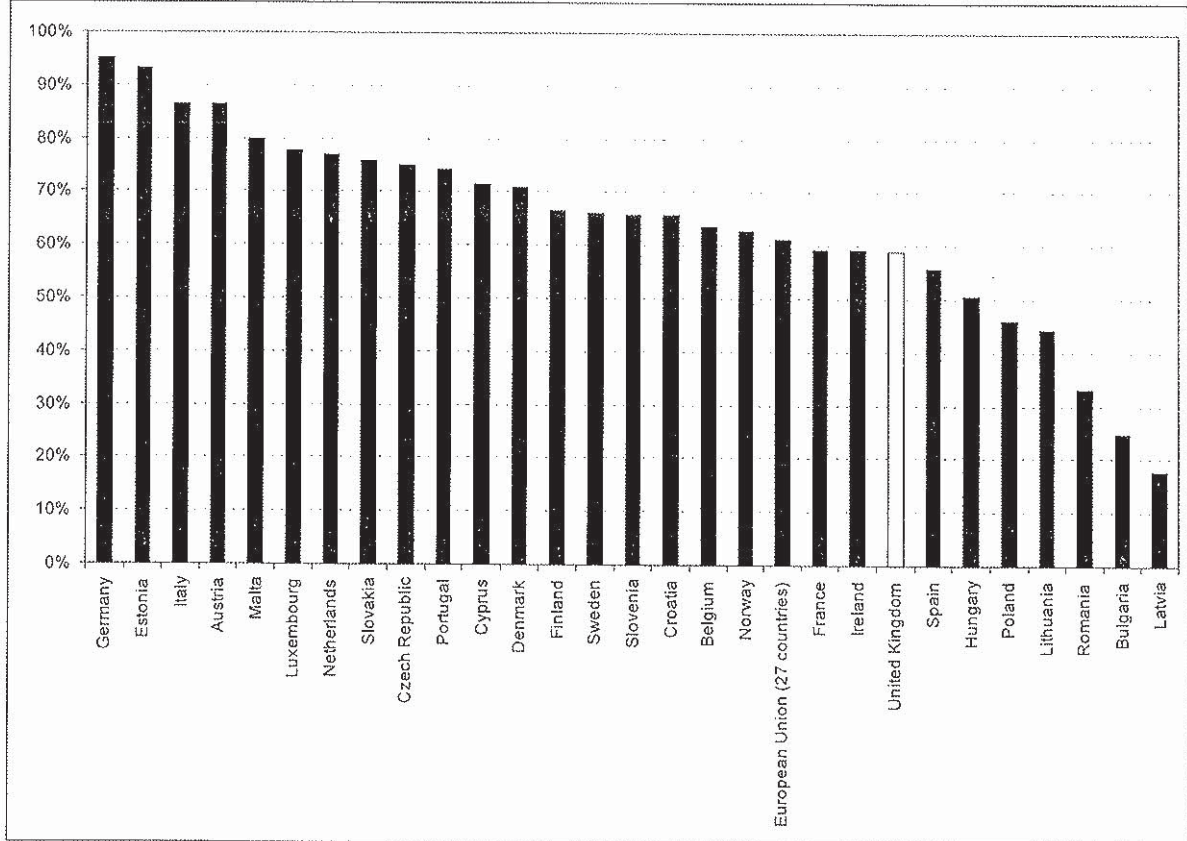
Source: London Economics and PwC

Innovation and Research and Development

Electronic communications is one of the leading sectors in terms of expenditure on research and development. Between 2001 and 2009, R&D spending in the telecommunications sector increased from around £750 million to more than £1 billion (peaking at £1.5 billion in 2007)²³. In 2009, the sector accounted for almost 7% of total R&D performed by UK businesses, with only the pharmaceuticals, aerospace, computer (and related activities) and motor vehicle sectors spending more. The fact that the telecommunications sector accounts for a much larger proportion of R&D than it does of the UK's GVA (just over 2%)²⁴ illustrates that it is an R&D-intense sector.

In terms of innovation, telecommunication firms in the UK are not as innovation active to the same extent as their European counterparts (see Chart A7 below), with only 59% of firms active in some type of innovation, be it product, process, organisational, marketing etc. This is below the EU average. However, this is an indicator of the quantity of innovation across firms in a country rather than the level and quality of firm-specific innovation.

Chart A7: Proportion of Telecommunication Firms that are Innovation Active, by EU Country



Source: Eurostat (Community Innovation Survey)

²³ Source: ONS

²⁴ Source: ONS

Consumer protection

Ensuring a high level of protection of personal data and privacy, as well as ensuring the integrity and security of public communications networks, is one of the central goals of the regulatory framework. This is important for two reasons: firstly, there is scope for severe detriment if privacy and security concerns are not sufficiently addressed, and secondly; the success of the electronic communications sector is dependent on consumers having trust and confidence in the service. Failure to address privacy and security concerns can have significant impacts, some of which are outlined in Table A4.

Table A5: Impacts of Security and Privacy Failures

Consumers	Businesses	Government
<ul style="list-style-type: none"> • Loss of confidential data and risk of misuse • Financial loss • Emotional and physical stress • Damage to hardware and software 	<ul style="list-style-type: none"> • Loss of confidential data and risk of misuse • Intellectual property theft • Loss of revenue and productivity • Loss of customers (e.g. due to negative publicity) • Damage to assets that are linked to communication networks 	<ul style="list-style-type: none"> • Loss of confidential data and risk of misuse • Loss of service provisioning for critical government functions • Loss of productivity • Loss of confidence of citizens • Damage to hardware and software

As discussed earlier, the electronic communications market is generally working well for the majority of consumers. Furthermore, there is already a high level of inherent resilience in electronic communications networks and the services that run over them, especially those which form part of the critical national infrastructure.

Nevertheless, there remains a certain level of detriment in the market that requires tackling. Around four per cent of consumers have been the victim (or know someone that was a victim) of online identity theft in the past 6 months, whilst seven per cent have been the victim of people making transactions using someone else's bank details²⁵. Furthermore, a quarter of UK companies suffer a serious breach of security each year and the costs of such incidents can range from £10,000 for small firms to more than £1 million for larger companies²⁶.

The economic cost of cybercrime in general was recently estimated to be between £3.1 billion per year for citizens, which was mostly split between identity theft (£1.7 billion) and online fraud (£1.4 billion). The cost of online fiscal fraud to Government was calculated at £2.2 billion per year, whilst the cost to business was estimated to be £21 billion per year (including IP theft and industrial espionage)²⁷. Shortcomings in security and privacy protection also have costs in terms of emotional stress to consumers; whilst these have not been quantified, survey evidence shows that one in twenty adults have been the victim of people saying upsetting things about others on internet sites, whilst three per cent have experienced children accessing adult content through the internet²⁸.

In addition to the direct costs outlined above, consumer concerns about privacy and data security can also prevent them from making the optimal use of the internet. Almost one-in-five internet users do not buy goods online or carry out banking activities due to security concerns (see Table A6 below), meaning that they do not benefit from the potential savings that the internet offers. More than one fifth of users are reluctant to engage in social and professional networking due to security concerns. Furthermore, more than one quarter would never enter their home or mobile phone number, whilst one-in-eight would never enter their personal email address²⁹. As a result, some consumers may be missing out on product offers or certain information that they would otherwise prefer to receive, or they may not be able to access certain websites that they would use if they had more confidence and trust in the network. Therefore, ensuring a greater level of consumer protection is ultimately in the interests of both users and providers of electronic communication.

²⁵ Ofcom Consumer Concerns; June 2010 data

²⁶ *Ibid*

²⁷ Delica in partnership with the Office of Cyber Security and Information Assurance in the Cabinet Office, 'The Cost of Cyber Crime' (February 2011)

²⁸ Ofcom Consumer Concerns; June 2010 data

²⁹ Ofcom, Media Literacy Wave 1 tables 2010 adults

Table A6: Internet activities prevented by security concerns, 2010

	All
<i>Per cent</i>	
Ordering or buying goods or services for private use	17
Carrying out banking activities such as account management	19
Providing personal information to online communities for social and professional networking	21
Communicating with public services or administrations	4
Downloading software, music, video files, games or other data files	14
Using the Internet with mobile device (eg laptop) via a wireless connection from places other than home	7
None of these	59

Source: ONS Statistical Bulletin 'Internet Access 2010'. Base: UK adults who accessed the internet in the last twelve months