

Dear Sir/ Madam

These responses only apply to the data protection aspects of this Call for Evidence. These are based on my research into the new uses of data that different organisations are developing and which are labelled 'Big Data' or 'data analytics'. My research includes organisations in retailer, loyalty card firms, financial services firms and the social housing sector.

3. What evidence is there that the EU's competence and the way it has used it (principally the Data Protection Directive) is meeting the challenges posed by the increasing international flow of data, technological developments, and the growth of online commerce and social networks?

There are several challenges listed in this question and each one is not met by the Data Protection Directive because each challenge is very different to when the Directive was implemented:

- International flow of data: the World Wide Web and standardised container transport have been two of the main drivers of globalisation. Markets are international and the supply chains that produce products from them are international. So data is more likely to flow across international borders at some stage in the production and consumption products. International borders are the boundaries of different cultural value systems and legal systems but there needs to be some 'bridge' to smoothly join these systems in order for trade. The Data Protection Directive was written when world trade was much less globalised and when data was much less used in supply chains. And the use of data will continue to grow.
So the law must include a capability to harmonise with other legal systems, i.e. some form of interoperability.
- Technological developments: the technologies that we call 'Big Data' are based on new IT technologies (e.g. Hadoop and Map Reduce) that produce novel opportunities for capturing and analysing data. These new ways of analysing data are expanding much faster than the based technologies that enable them.
The commercial and public sector organisations that I talk to are just scratching the surface of what can be done with their data. Most of their data is not being used. The potential benefits of Open Data and other types of data sharing are also in a very early stage of development. Even the most advanced firms have little idea of the vast potential of how they can use data and they each doing things in their own way – there is little commonality because there is so much that can be done and everything is new. Furthermore, the most advanced firms are way ahead of other firms and most SMEs have little idea at all.
It is impossible to forecast the ways that data will be used or combined because it can be shared and reused without wearing out. Data is the opposite of a commodity – its *specific use* will either be what generates value or does harm.
So the law must be able to 'hit a moving target'. We should aim to support *outcomes* rather than inputs like data, its uses and its users which cannot be forecast – one worthy outcome is *maintaining customer trust*. This includes not surprising customers and it involves educating them to be aware of the implications of sharing their data.

Growth of online commerce: online commerce is a fundamental marketing channel for any firm. The recent poor performance of Morrison's has been linked to their weak online channel. Also, the quality of the e-commerce arm of a business is measured by its ability

to personalise suggestions, products offers and services. But personalisation requires personal data. Value creation is subjective. So the law must cover the vast amount of data that customers give away and that business need in order to sell the right things to customers. Limiting the ability of firms to use this data will limit the quality of the products and services that they produce and their economic growth.

4. What evidence is there that proposals for a new EU Data Protection Regulation will be advantageous or disadvantageous to individuals, business, the public sector or any other groups in the UK?

The new EU Data Protection Regulation as proposed are disadvantageous to individuals, business, the public sector and our economy. Value creation is subjective and personalisation requires personal data. Also, new uses of data are gradually being uncovered, it is impossible to forecast how data will be combined and analysed in the future.

But one thing is certain. These new analytical technologies help organisations to [a] use their resources more precisely and [b] can be used to develop wholly new products and services (e.g. social media themselves).

Limiting the ability of firms and the public sector to use data in new ways will limit our ability to provide services and it will limit the growth of our economy – whilst other economies will not be so limited.

This is another reason to legislate in terms of *outcomes* [i.e. protect customer trust] instead of inputs that have complex dependencies.

7. How could action, in respect of information rights, be taken differently at national, regional or international level and what would be the advantages and disadvantages to the UK?

The different levels of our economic and legal systems have different needs. On a national level each EU country has a different legal system, culture, value set and history. But we need economic and legal systems that work smoothly together within the EU level. Similarly, the EU legal system must work smoothly with other regional systems, e.g. the US and China.

Each system must be able to fit locally and globally at the same time – which looks mutually exclusive.

A way to deal with this conundrum is to note that any system has many many aspects and these can be viewed in different ways and at different times. There are aspects of national legal systems that only act on a national level. There are other aspects that only act on an EU level, or only on international level.

So the new legislation must include a provision to harmonise different regional legal systems on a global level in a similar way that trade talks do so. This is also an advantage of having an EU level [i.e. EU legislation] because it helps nations deal with other regional level entities to agree the global level – a single country would find this difficult.

But nation level flexibility must also be preserved. From the MOJ workshop's roundtable it seemed that a Directive approach would preserve more flexibility than a Regulation. Other legal ways to preserve flexibility should also be considered, e.g. Safe Harbour-type solutions.

10. What future challenges or opportunities in respect of Information Rights might be relevant at a UK, EU or international level; for example cloud computing?

Cloud computing potentially spreads the storage, processing and use of data [or inferences] across different legal systems. This was, until recently, more of a matter of the data owner being aware of this issue and then choosing a cloud provider that stored the data in a location with an appropriate legal system.

But the other day a US judge directed Microsoft to give up some customer data that is stored in Ireland (<http://www.bbc.co.uk/news/technology-27191500>). This is an international level issue that new legislation needs to deal with. I.e. how can different legal systems be

harmonised in the area of access to stored data by external governments and other organisations. In the example above how does the Irish legal system deal with this specific issue?

Other future challenges will come from the unfolding development of how these Big Data analytic technologies are used. The base IT technologies (Hadoop, mapreduce) have been produce and even though they continue to be developed their capabilities will remain large scale (i.e. large scale storage and processing of data). But their use is escalating and developing at a much faster and more complex way.

By 'complex' I mean that the relationships between new data types, new data processing algorithms, new ways of combining data – all being used by more and more organisations for more and more purposes. The unknowable dependencies between these diverse factors make outcomes difficult to forecast. So new legislation needs to be able to 'hit a moving target' – this is another reason why we should try to ensure that an *outcome*, like customer trust, is safeguarded rather than an input, like 'type of data' or 'use of data'. Specific inputs can be combined in unforecastable ways but the general outcome that we seek still remains the same.

Summary of general points

- Value creation is subjective so most value is personalised so personal data is required – limiting the ability of commercial and public organisations to use personal data also limits economic development and innovation in public services. This is disadvantages at a personal level and at a national level.
- Data is the opposite of a commodity as it can be used and reused in different ways – ways we have not thought of yet. There are too many ways to use, reuse and recombine data for use to use prescriptive legislation. We should aim to support *outcomes* rather than inputs like data, its uses and its users which cannot be forecast – maintaining customer trust is the prime outcome.
- Modern products and services are produced by supply chains and business ecosystems so effective production requires data sharing. Innovation and economic growth are also best driven by collections of people and organisations and the shared data uses emerge as new uses develop so new data uses cannot be forecast. Limiting the ability of organisations to experiment with new uses of data will limit economic development and the development of better and more efficient public services. Limitations should be in the form of outcomes (e.g. safeguard customer trust) not inputs (overly specific uses of data). Flexibility must be built in.
- New legislation must be fit for purpose at each of the national, regional and international levels. National legal and cultural systems have different requirements but must fit together at the regional level. Similarly, new regional legislation is the basis for new international legislation.
The requirement for solutions that at the same time have both local characteristics and global characteristics may seem mutually exclusive. But the term 'levels' is common way of dealing with problem. Systems have many 'levels' because different phenomena emerge at different levels. We can look at the different issues and outcomes that we wish to legislate for and say 'Which is their natural level?'. Most issues can be assigned a level: national, regional, international. So the problem can be made smaller and less complex.

I hope that some of these points were useful in developing your thinking. Please contact me if you wish me to expand on any of these points.

Regards

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