

# Data protection challenges in the new era of Big Data

“Data is the new oil” - This statement by Neelie Kroes in 2011 has since been on everyone’s mind and with the constant development of new technologies, the importance of data has grown dramatically over the past few years and in recognition of this it seems that we have now entered into a new era: the era of Big Data. William Long and Geraldine Scali, Partner and Associate respectively at Sidley Austin LLP explore the potential data protection issues that may arise.

## What is Big Data?

The EU’s Data Protection Working Party (the Article 29 Working Party) gives a clear description of Big Data explaining that it refers “to the exponential growth both in the availability and the automated use of information: it refers to gigantic digital datasets held by corporation, governments and other large organisations, which are then extensively analysed (hence the name: analytics) using computer algorithms<sup>1</sup>.” All in all, Big Data is “high volume, high velocity and high variety of information<sup>2</sup>.”

Undoubtedly, Big Data offers great potential for innovation and permits organisations to provide enhanced products and services to customers. Taking the example of the insurance industry, Big Data provides insurers with a more accurate and efficient means of risk calculation, in addition to the enhanced ability to identify and price new risks. A recent report on the influence of Big Data on the insurance market highlighted the willingness of consumers to share personal data when given an incentive, such as loyalty card schemes, telematics devices in order to lower car insurance

premiums and fuel and fitness apps that reward insurance customers for fitness and lifestyle choices<sup>3</sup>.

## Data protection concerns

While consumers may seem eager to share personal data in exchange for other benefits including personalised offers and targeted advertisement based on consumer profiles Big Data does raise a number of data protection issues, particularly in the EU under existing EU Data Protection Directive<sup>4</sup> and under the proposed EU Data Protection Regulation<sup>5</sup> which is intended to replace the Directive with one harmonised set of data protection laws in the EU.

## Purpose specification

Big Data shows that one of the main values of data is its reuse for analytics and profiling which could be contrary to the principle in the EU Data Protection Directive that personal data shall be obtained for one or more purposes and shall not be further processed in a way incompatible with those purposes<sup>6</sup>. This issue has been recently analysed in the Article 29 Working Party’s opinion on purpose limitation<sup>7</sup> in which it is explained that before using the data for any purpose other than the one for which the data was collected (i.e. for analytics purposes) a compatibility test should be carried out by the data controller who should consider the following factors: (i) the relationship between the purposes; (ii) the context of collection of the data; (iii) the reasonable expectations of the data subjects; (iv) the nature of the personal data; and (v) the impact on the data subjects.

This requires the data controller to make an assessment of whether the further processing of the data goes beyond the scope of the initial purpose for the data collection.

## Transparency

Compliance with the transparency principle under the EU Data Protection Directive whereby a data controller must be transparent about how it intends to use the personal data of data subjects is also a challenge in relation to Big Data. The Article 29 Working Party suggests that for there to be informed consent and transparency, data subjects should have access to their data profiles as well as the analytical methods used for constructing their profile from the data collected, in other words businesses will need to disclose their decision criteria.

## Profiling

When Big Data is used to analyse or predict the personal preferences, behaviour and attitude of individual customers, the Article 29 Working party considers that, free, specific, informed and unambiguous “opt-in” consent would almost always be required in order for the further use of the data to be compatible with profiling for purposes of direct marketing, behavioural advertisement, data brokering, location-based advertising or tracking-based digital market research.

Importantly, the proposed EU Data Protection Regulation may have a significant impact on how Big Data can be used to analyse or predict the personal preferences, behaviour and attitudes of individual customers. This is because the current draft of the Regulation imposes a new requirement to inform individuals about the right to object to profiling in a ‘highly visible manner’. The proposed Regulation also provides that profiling which does significantly affect the interests of an individual can only be carried out under limited

circumstances such as with the individual's consent and should not be automated but involve human assessment. It should also be noted that, in the latest amendments to the Regulation, the 'Right to be Forgotten' has been replaced by a 'Right of Erasure' giving individuals a right to have their personal data erased where the data is no longer necessary or where they withdraw consent which may in the future also limit the use of Big Data.

#### Security

With the recent NSA scandal, cyber security is more than ever an important issue to be carefully considered by organisations. As mentioned by the OECD<sup>6</sup>, "as the volume and value of data stored increases so does the risk of data breaches." Recently, PwC conducted a survey on Information Security Breaches and found that 93% of large corporations and 87% of small businesses had reported a cyber breach. The average cost to a large corporation of its worst security breach of the year was between £450,000-£850,000. As a result, it is critical for organisations to re-assess the security of their information systems and networks and make appropriate modifications to security policies, practices and procedures as advised by the OECD taking into account the amount and value of data processed.

#### Inaccuracy

Data controllers are under the obligations, under the EU Data Protection Directive, to keep the data they collect and process accurate and, where necessary, kept up to date. There is a particular risk with Big Data that the data collected, processed and further analysed becomes inaccurate through the various stages of

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processing and due to the type of analytics application used. Decisions based on inaccurate data may have significant negative impact on individuals and lead to discriminatory and unfair decisions which prejudice individuals.

In order to deal with this risk of inaccuracy, the Article 29 Working Party suggests, in its opinion on limitation purposes, that allowing data subjects to have direct access to their data in a portable, user friendly and machine-readable format would reduce the risks of using inaccurate data for decision-making purposes.

#### Conclusion

Big Data offers considerable advantages for organisations and increased competitiveness. However, particular care should be given to data security and other data protection principles in order to ensure that Big Data works for the benefit of both businesses and customers. Organisations should also closely monitor the progress of proposed EU Data Protection Regulation in 2014 to analyse the impact that the proposed EU data protection regime may have on Big Data.

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1. Article 29 Working Party's Opinion 03/2013 on purpose limitation adopted on 2 April 2013- WP 203.
2. Gartner IT Glossary.
3. <http://www.ordnancesurvey.co.uk/about/news/2013/the-big-data-rush.html>
4. Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data.
5. Proposal for a Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of the personal data and on the free movement of such data.
6. See OECD Digital Economy Papers No.222 "Exploring Data-Driven innovation as a New Source of Growth-mapping the policy issues raised by "Big Data" 18 June 2013
7. Article 29 Working Party's Opinion 03/2013 on purpose limitation adopted on 2 April 2013- WP 203
8. See footnote 4

Footnotes: