BIG DATA.
WHAT’S YOUR STRATEGY?
The term ‘big data’ is used to describe information of a magnitude and variety far greater than previously known. It refers to the use of technology to assess massive amounts of data in real time, often to learn more about organisations, machines, people and groups of people and their behaviour. It refers to the exponential growth in the availability and automated use of information and the speed in which it can be used. Big data also refers to gigantic digital datasets held by corporations, governments and other large organisations, extensively analysed with computer algorithms, together with free flowing unstructured data sourced from social media and the like. It can be used to identify general trends and correlations, but it can also become the basis for decisions which directly affect individuals.

Analysing data in a big data context can be a key basis of competition, but the business world has only recently begun to realise the potential benefits.

According to a survey conducted by research house Gartner, some 64% of companies planned to invest in big data technology in 2013, if they had not already done so. This leaves 36% of those surveyed who did not plan to invest in 2013. Meanwhile at the end of 2012, 42% of surveyed organisations had adopted big data technologies, yet just 15% of this figure had employed an enterprise strategy.

A separate Gartner survey of 398 government CIOs based around the world revealed that big data analytics is viewed as a top two priority, the other being replacing legacy systems. A total of 720 business leaders from around the world were surveyed by Gartner, with findings suggesting that media and communications (39%), banking (34%) and services (32%) businesses are prioritising big data investments in 2013. Half of the business leaders who work in transportation, 41% of those in healthcare and 40% in insurance said they were planning to invest in big data. There is no disputing that big data should now be a top business priority, with IDC also forecasting that the big data market will have grown from $3.2 billion in 2010 to $16.9 billion in 2015. By 2020, business transactions on the internet – business to business and business to consumer – will reach $450 billion per day.

But why does it matter?

Big data has the potential to improve the quality of products and services; enable infrastructure and machinery which businesses depend on to adapt continually and efficiently; improve the performance of employees; help organisations better understand customers; and reduce liability risks.

It is clear that leaders from every sector should be at the heart of an organisation’s big data strategy, but it is for CIOs to lead and demonstrate the approach, and ensure a business maximises the potential benefits.

But it is more than just financial investment. Innovation and cultural change are both at the heart of a successful implementation. Big data is now a board-level, business-critical issue, and a coherent strategy is therefore essential. Businesses that fail to construct and implement a big data strategy are putting themselves at a competitive disadvantage.

Big data has been evolving for several years. Now that it is here and no longer a background IT issue, it’s time to act.
Big data presents an opportunity for organisations to deliver radical changes to existing business processes.

It affords companies the ability to utilise the latest technology and data analytics techniques to capture insights from the information they collect. This could prove to be that elusive differentiating factor that separates them from their competition.

However, firms are only gradually beginning to exploit big data. According to a report by Vanson Bourne and Interxion, only a quarter of European organisations have built a business case for big data. Yet more than 90 per cent of companies that have an information technology strategy aligned with their business strategy have explored it.

“Investment typically has different stages that organisations go through,” according to Gartner. “It starts with knowledge gathering, followed by strategy setting.”

What are the key steps to consider when developing a strategy?

Leadership buy in
The key to a successful big data strategy is securing leadership buy in. Embracing big data requires cultural change within an organisation. Business leaders need to be closely involved in laying out the organisation’s strategy, but CIOs need to lead the approach and be clear as to how the organisation can maximise and capitalise on the benefits.

Big data is a boardroom issue, yet business leaders can be reticent about using data to inform business strategies. This underlines the importance of CIOs, and in some cases marketing departments, working alongside business leaders to ensure all sides understand the benefits of employing big data technologies.

Focus on value
It is easy to conclude that the outcomes of big data projects could always be uncertain, or result in little or no value in real terms for organisations. To provide the best chance of success, discipline is required, both in terms of financial investment and in the clarity of the aim behind a big data initiative acting quickly on insights gained.

While most companies are collecting, storing and analysing data, many organisations are struggling with both the business and IT challenges of big data. In a survey by Cisco earlier this year...
60% of respondents agreed that big data will help improve decision making and increase their competitiveness, but only 28% indicated that they are currently generating strategic value from their data.

**Ensure appropriate infrastructure is in place**

IT departments need to ensure an organisation’s technology infrastructure can handle the greater demands that big data can create.

Many IT systems will be ill-equipped to handle the volume and variety of data that needs to be managed and analysed. This will likely be the case with antiquated IT systems, but even if an organisation’s technology has recently been updated, it may still not be able to withstand the challenge. The very nature of big data requires a near instant response – organisations may need to invest in new IT systems and purpose-built technology to meet this challenge and urgency.

Underlining the significance of the perception by business leaders that IT is no longer a back office function and instead core to an organisation’s strategy, the majority of organisations now think that businesses’ big data projects would lead to an increase in IT budgets.

Almost three quarters of IT professionals surveyed by Cisco said that their businesses’ big data projects would account for data generated in “real-time” from “digital sensors, smart meters, video, and other non-traditional networked ‘smart devices’.” However, just a third said that firms “have a plan in place to take advantage of these new data sources.”

**Prepare for business risks**

Any big data strategy should consider issues such as controls and monitoring, particularly the need to classify data along legal and regulatory lines. Handling a volume of data of such magnitude also increases the risk of negative brand impact. Data sources often use information that may be personal or sensitive in nature, which carries a risk of being mishandled, whether intended or not.

Such a risk is further increased when information is intended to be shared outside an organisation.

“The ICO has indicated that the Data Protection Act does not prevent the sale of data. However, if an organisation “first obtains information from individuals with the intention of selling the database as a commercial asset, individuals should be informed how their information is going to be used, including that it will be sold.”

Andrew Brydon, TMT lawyer, Pinsent Masons

28% firms are currently generating ‘strategic value’ - CISCO
Big data – the international approach

US businesses are front runners in big data investment, with 38% of organisations surveyed indicating that they have invested in “technology specifically designed to address the big data challenge.” However, businesses in Europe, the Middle East and Africa (EMEA) are lagging behind in their adoption of such technology, according to the Gartner report.

According to Andrew Brydon, TMT lawyer at Pinsent Masons, “The main reasons why European businesses are behind their US counterparts in big data technology investment is that the explosion of data in the past two years has primarily been enabled by US-based companies. Many of the internet giants have their roots in the US. Likewise, the companies developing the tools for analysing all this data have tended mostly to be American.”

“However, the geographic lag time on technology and innovation is much reduced from what it used to be, and companies in Europe need to be ready to invest and develop accordingly,” in his view.

Businesses operating within Europe face different legal challenges around the use of data from those operating elsewhere in the world, according to Andrew Brydon, and this is another part of the reason why big data projects have been relatively lower in number in Europe compared with the US.

With both Germany and France pushing for tighter data protection regulation, “Legislation governing data protection in Europe is in some ways more restrictive than in some other parts of the world,” said Andrew Brydon. “A number of other legal considerations must also be weighed by businesses wishing to take advantage of the opportunities big data presents them. They must ask themselves questions such as who owns the data? and whether they have a right, or licence, to use it. They should also consider the possible impact of competition law. These are important factors in regulating how business should interact with this explosion of data.”

A survey from Cisco in 2013 suggested that more than a third of international businesses that had the ability to bring together ‘big data’ had still yet to outline how they would make use of the information.

According to the report 38% of IT leaders surveyed who said their firms had a “big data solution” also said that their firms “need a strategic plan to take advantage” of the information they hold.

Many organisations feel that data security is a major concern, citing data volume, the number of ways to access data, and lack of budget for security as the top reasons why securing data in big data projects is such a challenge.
WHO OWNS THE DATA?

At the outset it is vital that companies understand who owns the data that they are using.

Iain Connor, IP lawyer at Pinsent Masons says that “The starting point is to acknowledge that pure data is not the exclusive property of any one company. Therefore, it is possible for lots of companies to operate in the same space using the same data without infringing any intellectual property rights.”

Data used in big data projects may be protected by copyright and/or database rights held by a company, provided it uses its own intellectual effort in creating a copyright work out of data and/or makes a substantial investment in obtaining, verifying and presenting data.

Iain Connor points out that it is this ‘output’ produced by the company that may attract intellectual property rights and in doing so may become the exclusive property of its maker.

“The challenge for businesses is for them to work out a strategy to exploit big data for anything other than their business as usual activities.”

Marc Dautlich, Head of Information Law at Pinsent Masons, says that companies must challenge themselves to address core legal questions on intellectual property rights before developing big data analysis and technologies into business processes.

“It is really important that companies think through some fundamentals from a legal perspective. Intellectual property rights – who owns the input data companies are using in their analysis and who owns the output of big data technologies are at least as important as data privacy issues which have perhaps been more widely reported. This is particularly relevant where there are third parties involved and is because big data applications may not always necessarily involve personal data.”

Marc Dautlich says that businesses using big data are able to capture higher quality information to inform their decision making.

“Given the increase in the availability and now the usability of data that organisations increasingly gather, businesses are able to make business decisions informed by evidence rather than gut reaction. Big data is clearly a more rational way to do business than guesswork, and across many sectors the question is when and how they will best make use of the possibilities, rather than if.”
The Article 29 Working Party, a committee made up of representatives from each EU national data protection authority, has taken the view that companies “almost always” require individuals’ “free, specific, informed and unambiguous opt-in consent,” in order to use data they have previously collected in new big data projects that involve analysing or predicting their “personal preferences, behaviour or attitudes.”

Marc Dautlich says that this position underlined obstacles in data protection legislation, but was short on practical guidance for busy decision makers.

The Working Party has also suggested that individuals should be given access to any profiles created about them. They should also have access “to the logic of the decision making [algorithm] that led to the development of their profile” and the “decisional criteria” used in creating their profile.

Marc Dautlich adds that “The Working Party has made it quite clear that organisations who wish to re-use personal data they have collected from individuals for the purpose of direct marketing, behavioural advertising or other profiling in big data projects should invest some resources in promoting the benefits of these activities to consumers. Firms in some cases will not be able simply to rely on consent given previously by individuals for the use of their data where the purpose outlined for the initial collection of that data was different.

“As a result, it will be the businesses that best convey to consumers how they can benefit by permitting the use of personal information in big data projects that will themselves glean the most insight from the projects.”
A report by Visa earlier in the year suggested that big data could eventually lead to the replacement of traditional payment techniques, and that customers may be able to walk into a store, pick up an item and walk out with it. Visa said that the industry should “cater for multiple ways of concluding a transaction,” and that in time payments would be automatically triggered through a linking of identity – ascertained using facial recognition or other biometric measurements – with virtual systems of payment.

Commenting more generally on the financial services perspective, John Salmon, Head of Financial Services at Pinsent Masons, says that many financial institutions may gain significant advantages if they implement effective big data strategies.

John Salmon adds that “Financial institutions make decisions about individuals every day, sometimes with a full picture, and sometimes without the data necessary to guarantee that an accurate consideration of an individual’s personal circumstances has been made. While more sophisticated analysis techniques may open up the possibility for inferences which unfairly discriminate against individuals, they also open up the possibility of more informed decisions being made, which ultimately could lead to better outcomes for both consumers and the wider economy.”

Retailers have arguably forged ahead quicker than other sectors in recognising the benefits of big data for both customer and company.

Alistair Maiden, Senior Lawyer and Data Protection Officer at ASDA, says that the supermarket chain had been collecting and using volume data generated from in store sales for several years. “The challenge continues to be finding innovative ways in which to interrogate the information that we have in order to create customer savings and value.”

Alistair Maiden, Senior Lawyer and Data Protection Officer, ASDA
1. Make sure you understand your data collection and sourcing practices, your current position in relation to what data you actually have, and how you can obtain and use it.

2. Specifically decide and understand your proposed aims for using data – what you want to do with it – but also remember that it may not always be possible to use data in the way you’d like. Ensure you consider ownership restrictions.

3. It is highly important that you review the procedures which govern the ways in which you obtain consent to use data and the ways in which you make the purposes for which you intend to use data transparent. Decide on whether you want to take an offensive or defensive strategy for obtaining consent. ‘Future-proof’ your business against changes in law, technology and public perception that could result in ‘new’ liabilities or reputational damage.

4. Consider the wider legal picture, including international and competition issues. For example, legislation governing data protection in Europe can be more restrictive than in other parts of the world. Intellectual property laws may be converging but they are not identical in all countries. Competition laws will differ.

5. Be clear both as to how to protect your data from competitor exploitation and as to how you may be able to target competitor data.

If you have any queries about any of the issues raised in this document or in relation to your organisation’s big data strategy please contact:

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