Ready for takeoff?
Overcoming the practical and legal difficulties in identifying and realizing the value of data

Executive summary
208,300 photos
Unstructured data is booming: every minute 208,300 photos are uploaded to Facebook and 350,000 Tweets are posted on Twitter.4

79%
Seventy-nine percent of businesses believe that big data will boost revenue.9

49%
Forty-nine percent of consumers say that they will be less willing to share personal information in the next five years.5

71%
Seventy-one percent of executives state that they are not concerned that customers may start to restrict the use of personal information. This compares with just 19% who are worried.10

US$325 billion
Better analytics tools create huge value. The mainstream adoption of big data analytics would boost the output of global retail and manufacturing industries by $325 billion.11

80%
Eighty percent of organizations are in the early stages of big data initiatives.13

39%
The world currently has 2.7 billion internet users, 39% of the world’s population.1

96%
The world currently has 6.8 billion active mobile subscriptions, equivalent to 96% of the world’s population.2

6 zettabytes
The volume of data generated or processed in 2014 will exceed 6 zettabytes, increasing to 40 zettabytes by 2020.3

78%
Seventy-eight percent of consumers believe that their personal information enables companies to make more money.6

59%
Fifty-nine percent of business decision-makers use customer-generated data for customer insight.7

70%
Seventy percent of consumers say that they are never happy for companies to share their personal data, compared with a quarter who say they are happy to share their personal data.8

20%
Companies that successfully use data outperform their peers by up to 20%.12
Big data and analytics defined

Data comes in many forms. It may be structured or unstructured, and it may be generated by organizations themselves or obtained from third parties. Big data refers to the huge and increasing volume of the data now available, as well as the variety of it and the velocity at which it can be processed.

Analytics is the means for extracting value from this data – the tool through which actionable insights are generated. Without analytics, businesses have no way of using their big data to establish competitive advantage.
Executive summary

► Big data technologies represent a disruptive innovation that market-leading businesses will use to drive competitive advantage. Seventy-nine percent of business “decision-makers” believe that big data will boost revenue.\(^1^4\)

► The value of big data lies in the insights that businesses can draw from it, rather than in the information itself.

► There are practical problems to overcome. In particular, there will be a battle for talent, driven by the shortage of people with the technical skills to generate insights. This requires people who can identify the right business questions that can be solved with analytics.

► While big data offers huge opportunities, there are also serious risks, including the legal and regulatory hazards relating to issues such as data privacy that can result in breach of trust. Seventy percent of consumers say that they are “never happy” for companies to share personal information while 49% say that they will be less willing to share personal information over the next five years.\(^1^5\)

► To secure topline value from big data, enterprises need a holistic and strategic plan for identifying the opportunities, overcoming the hurdles and managing risks.

Fueling the plane

Big data is the phenomenon of our time. The combination of the astonishing explosion of data and the rapid development of new technologies capable of storing and processing this information will transform the way enterprises run their businesses. After an initial period, when big data was an optional extra for most businesses, its value is now widely accepted. Big data and analytics are starting to enter the mainstream of daily business practice.

Organizations all around the world are racing to exploit the opportunities big data presents. But they have made relatively little progress at a strategic level, in either realizing the value or managing the risks. Few companies have been able to quantify the value to be obtained from analyzing the structured and unstructured data they hold in order to generate insights on which to base decisions.

Many companies are yet to develop a comprehensive framework for analyzing what will drive that value. Projects have generally been implemented individually and separately, rather than as part of a coherent plan across the enterprise. Often, businesses do not even know what questions they should be asking.
Executive summary

Ready for takeoff?

Nor have companies yet arrived at a full picture of the barriers that stand in their way as they seek to realize the value of their data. These barriers include a number of practical issues, including the volume of data with which businesses are now confronted and the skills shortages in areas such as analytics.

Legal bumps

Most of all, the legal and regulatory questions that surround businesses’ use of all types of data represent a huge barrier. Concerns such as privacy, data protection, competition law and intellectual property rights remain hugely sensitive. Laws across jurisdictions are inconsistent and constantly changing. The potential penalties for the misuse or loss of data are rising; for example, the European Parliament has voted for fines of up to 5% of a company’s global revenues for data privacy breaches. More importantly, companies that fail to consider carefully how they use customers’ digital footprints risk violating their customers’ sense of privacy and risk losing those customers.

Forty-nine percent of consumers say that they will be less willing, over the next five years, to share their personal data. This emphasizes the fact that companies need to serve their customers better.16

Big data can make your business fly

Is it possible to overcome these difficulties in order to unlock the value of your business’s data?

The answer is yes, if enterprises are prepared to undertake an honest appraisal of their existing big data capabilities and to look at the drivers of value within their businesses, and the challenges preventing them from realizing this value. Flexibility, adaptability and integrated thinking will be crucial.

However, in such an uncertain and difficult legal environment, this process must go hand-in-hand with a rigorous examination of what regulation currently allows. Those businesses that manage this balance successfully will build customer confidence and trust. And drawing together these legal considerations will underpin a more integrated and holistic approach to big data. This requires a shift in the mind-set of board members and a transformation across the organization and closer collaborations between various functions.

Ready for takeoff

This paper addresses these issues by looking at five key industry sectors where companies’ exploitation of big data is at different stages of development. The conclusions it makes are based on the extensive work conducted by EY across its global team of industry specialists, big data and analytics consultants, and legal and regulatory experts. It also considers the evidence presented in external studies and research, as well as drawing on the best practices of the many market-leading businesses with which EY works.

Using all these insights, it sets out a blueprint for organizations determined to identify value drivers within their business, and to confront and prepare the challenges they face in exploiting such enormous potential.

With companies facing increasing suspicion about their use of personal data, it is now more important than ever for them to clearly identify and focus on the value they can generate from data; to consider carefully and respond to the regulatory, legal and practical issues they face; and to develop a coherent and company-wide big data strategy. Big data is ready to take off. Those who fail to address the technical, strategic and risk issues will be left behind.

Just as the pilot of a plane must complete a series of checks before taxiing down the runway, so business leaders must master the risks and opportunities of big data in order to get their enterprises flying.
Heatmap

The difficulty of knowing what business problems they should be solving with data and analytics

The technical and technological challenges of dealing with the volume, variety and velocity of data

The lack of a holistic approach

The shortage of talent with data and analytics skills

The fear of cyber attack

The difficulty of building the business case, given the lack of awareness about potential benefits

The legal issues around personal data, privacy and copyright

Very low
Low
Moderate
High
Very high
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Additional EY thought leadership resources

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*Born to be digital: how leading CIOs are preparing for a digital transformation*, EY, 2014
ey.com/CIO

*Cultural behavior and personal data at the heart of the Big data industry: finding the right balance between privacy and innovation*

*Under cyber attack: EY’s Global Information Security Survey 2013*
ey.com/giss

*Privacy trends: the uphill climb continues*
ey.com/bcm trends

*The Big Data Backlash*, EY, 2013
Notes

5 Big Data Backlash, EY, 2013.
6 Big Data Backlash, EY, 2013.
7 Big Data Backlash, EY, 2013.
8 Big Data Backlash, EY, 2013.
9 Big Data Backlash, EY, 2013.
10 Extracting Insights from Exabytes, GP Bullhound, November 2013.
12 Big data and enterprise mobility, EY, 2013.
13 Big data and enterprise mobility, EY, 2013.
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