Data and transparency

In recent years the amount of data being produced has massively increased, and new digital technologies have resulted in exponential leaps in computing power. As a result, the use of big data analytics over the next decade is likely to become far more powerful and sophisticated, with significant positive and negative implications.

For example, companies that successfully leverage big data are able to provide highly targeted products and services. Public policy may also become much more effective if researchers can analyse the real-time behaviour of millions of people at a time. On the other hand, people's privacy – and even freedom – may be seriously undermined without proper checks and balances.

Implications

- Big data offers the opportunity to better understand systems so that the outcomes of any intervention can be improved. However, organisations need to not only to put the right talent and technology in place, but also structure workflows and incentives to optimise the use of big data. [1]
- More than ever before, our world will be defined by our creation of data, what we do with it and how we process it. Communication technologies are fuelling this evolution by spreading new ideas and innovations to more people each day.
- The increased ubiquity and analysis of data presents huge opportunities to optimise systems for efficiency and positive outcomes, but this largely depends on people's willingness to share their data with business, government and other stakeholders. If the public are not able to exert some control over when and how their data is shared and stored, it's possible that a backlash will occur, and useful insights will be lost. Better terms of service and greater transparency around data gathering and storage could help to address concerns, though more will need to be done to ensure that privacy, security, intellectual property – even liability – are always a top priority in a big data world. [2]

Footnotes:

1. McKinsey (2011). Big data: The next frontier for innovation, competition, and productivity.
2. McKinsey (2011). Big data: The next frontier for innovation, competition, and productivity.

Current trajectory

- In 2012 alone, humans generated more data than over the course of our entire history. And the rate of production of data more than doubles every two years. [1]
- In 2012 during Hurricane Sandy, Twitter hashtags were analysed to find out where power, fuel, food and water were most urgently needed. [2]
- The big data industry is growing at breakneck speed, and human capital is playing catch up. There is currently a shortfall of data scientists, while in 2014, job postings for "big data talent" rose by 46% from 2013 and by 162% for cyber-security specialists. [3]
- In 2013 the International Data Corporation (IDC) and International Institute for Analytics estimated that the global market value of big data had reached $16.1 billion. According to IDC, Big Data technology and services market are projected to grow at a 27% annual growth rate to $32.4 billion through 2017. [4]

Footnotes:

1. IDC quoted in NY Times (2012). Big Data's Impact in the World.[/fn]
2. Social media use has led to an upsurge in the generation of data. People now take more videos on their smartphones and digital cameras than ever before, uploading around 100 hours of videos to YouTube every minute, and close to 200,000 photos to Facebook every 60 seconds. [fn]Bernard Marr (2013, August). Big Data: The Mega-Trend That Will Impact All Our Lives.
3. Frost and Sullivan (2014). World's Top Global Mega Trends To 2025 and Implications to Business, Society and Cultures. Slide 10.
4. Dice (2014, April). The Popular Pros.
5. International Data Corporation (2013, Dec). New IDC Worldwide Big Data Technology and Services Forecast Shows Market Expected to Grow to $32.4 Billion in 2017