

# Big and open data

## While 'big data' offers huge opportunities, businesses must act fast in order to exploit them

By Neelie Kroes, vice president, European Commission, responsible for the Digital Agenda for Europe

**T**oday the world is witnessing a new industrial revolution – a digital revolution, driven not by coal or steel, but by high-performance computing, and fuelled most of all by the power of data.

From industrial processes to scientific research, most activities produce data, data that anyone can now use on an unprecedented scale, allowing new products and services, new business models and processes, and new ways to make scientific discoveries.

'Big data' is expected to grow 40 per cent per year, surpassing €10 billion (\$13.9 billion) by 2015. That is about seven times faster than the overall information and communication technology (ICT) market. In the United Kingdom alone, the number of specialist big data staff working in larger firms could rise by 243 per cent in the five years to 2017.

To seize these opportunities and compete, Europe needs to be quick and effective. It needs to develop the enabling technologies that underpin innovation; it needs better ICT infrastructure; and it needs better skills. At the same time it needs the right policies – on interoperability, privacy, security and intellectual property.

Tomorrow's data-driven economy will be research-rich, full of opportunities for business and for modernised public services. Data sets and the infrastructure they use will be available, high quality, reliable and interoperable – and able to create new value, benefiting the economy and boosting society.

The framework for this activity will need to ensure privacy, security and coherent rules on data ownership. The European Union's proposed reform on data protection aims to make those rules modern, strong, consistent and comprehensive, and to safeguard privacy in the digital age, while building trust and confidence.

The EU will be consulting on voluntary guidelines on big data applications: looking at how issues such as data anonymisation, information notices, consent and consumer privacy could work and be improved in

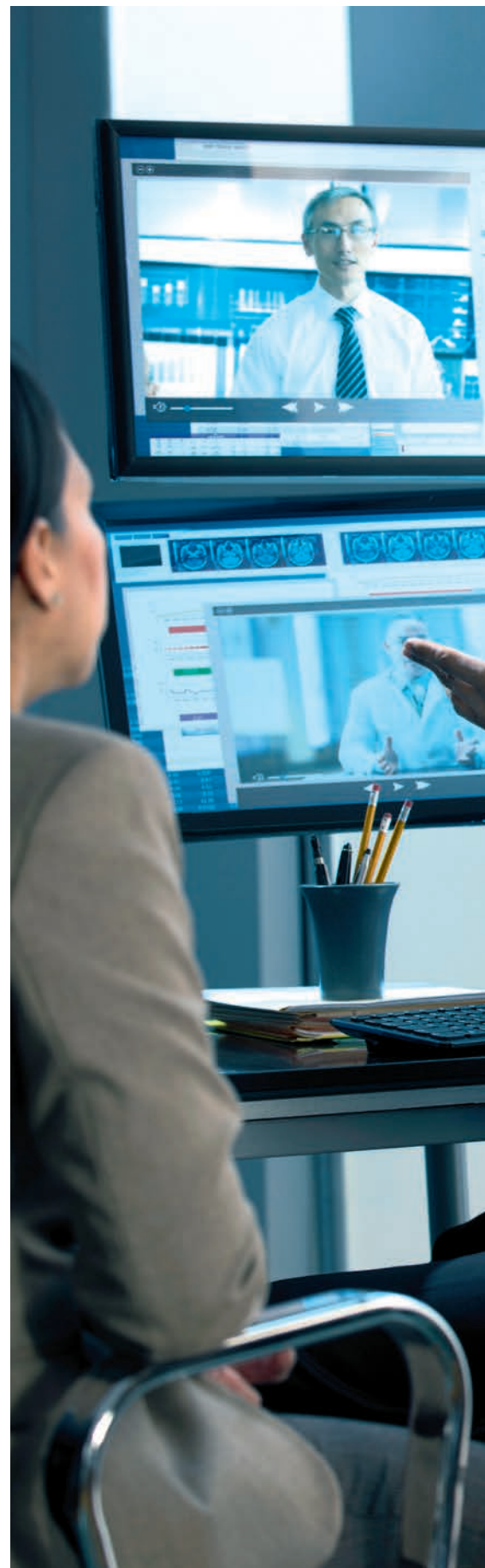
practice. Of course, technical safeguards count as much as rules. So it will also actively invest in innovative technical solutions that can enhance privacy 'by design', or easily anonymise or pseudonymise data.

Supported by its cybersecurity arm, the EU Agency for Network and Information Security (ENISA), the EU will also look at big data security risks – and set out how to manage and mitigate those risks, for example through tips on how to store data to prevent it from becoming compromised. As more and more sectors go digital, the right 'cybersecure' mindset should be embedded everywhere, with companies able to detect and disrupt attacks.

The current copyright framework is often an obstruction, especially for scientists hoping to use data or text mining. Such research is often innovative and life-saving: the EU is already looking at how to reform the copyright framework so that it no longer stands in the way of such research. And, even under the current framework, I urge the EU's national governments to allow those activities as much as they can – after all, the power often lies in their hands.

Finally, in many sectors – finance, for example – requirements to house data in a certain country or area limit the cross-border flow of information: they are a barrier to the EU single market in cloud computing and big data, and an obstacle to European leadership. The EU will be looking very carefully at those barriers, and at what more it can do – as well as consulting on issues of data ownership and liability, especially for the Internet of Things.

From sustainable health to smart cities, there is a huge data dividend waiting to be delivered. Awaiting Europe are a more competitive economy, more innovative and nimble small businesses, better public services, and a better quality of life for its people. I do not want to see the European economy, or people, suffer for lack of capacity; nor do I want to see an over-reliance on solutions from abroad. I want European leadership. In the emerging global data economy, no one can afford to miss out, or get left behind. ■



With expected annual growth of 40 per cent, big data will necessitate large numbers of specialist staff, as well as investment in skills and infrastructure



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