There's gold to be mined from all our data

Tim Berners-Lee and Nigel Shadbolt

There is no need to fear a 'database state'. The information age will boost the economy and make life easier

Data is the new raw material of the 21st century — a resource that gets more plentiful every day. In today's web-connected world it drives transactions and decisions of every kind. We need accurate data to help us to catch trains and buses on time, anticipate the weather and pick the right place to live, course to study or product to buy.

Two years ago in this newspaper we anticipated a world in which, if you typed your postcode into a government website you would get all sorts of data. You would see the crime rate for your neighbourhood, when the buses ran and the rubbish was collected, how the schools were doing and what your local authority spends. This is now a reality at data.gov.uk.

When the data has been released, applications have quickly followed, from mobile apps to find an NHS dentist to companies that use the open data on spending to advise local authorities on how to get the best value for money. These open data apps are creating new businesses for their developers and great resources for us all. Take, for example, bus finders (see London Bus Stop Live or BusMate London) — these were developed within weeks of the data's release and did not cost the taxpayer a penny.

It is not often that the public sector is a crucible of innovation — but in this case it was. Releasing data has created new opportunities and made the UK a world leader in this area.

Using government data is not new but the scale and ambition of this is. Open data helped Florence Nightingale to revolutionise nursing in 1856 when she showed that most soldiers in the Crimean War died of disease rather than from their wounds. A few weeks ago we learnt that people admitted as emergencies at weekends are more likely to die in our hospitals. Just as it did in Florence Nightingale's time, this sort of data will improve our public services.

In the Autumn Statement, much more open data was promised. The Met Office is releasing information in unprecedented detail — forecast data for more than 5,000 sites across the UK at three-hourly intervals. Developers can take this and produce their own services, customisations and applications. In the US, where weather data is already freely available, the private sector weather market is worth $1.5 billion a year.

As more transport data is released we can imagine applications that provide seamless travel plans, working across the country and various means of transport. We can look forward to applications that show the timetables or next bus to arrive at any of the 350,000 bus stops in Britain, not just in London. The promised release of rail fare data

could help travellers to find the best deal at any given time. Regular data releases on roadworks and congestion are to be made — any improvements here are likely to be worth many millions of pounds a year.

All this will allow application developers, software companies and tech businesses to build products and services that can feed back into the economy. At a time of austerity, open data's part in generating innovation and growth is important.

The Government has announced funding for an Open Data Institute that we have been asked to lead. It will help the public sector to use its own data more effectively. Working with private companies and universities, it will also develop the capability of UK businesses to exploit open data, fostering a generation of open data entrepreneurs.

The smoother we make the process of producing data, and the more powerful the tools we give citizens and industry to get value from it, the more we can capitalise on Britain's leading role in this field. There are billions of pounds to be released from public sector information and thousands of jobs to be created.

All this data has been paid for by taxpayers. So the institute's mission will be to make sure that we can all make the best use of it. One reason that the worldwide web worked was because people reused each other's content in ways never imagined or achieved by those who created it. The same will be true of open data.

In the drive to free up data we have always argued that it is essential to respect individual privacy and national security. So long as privacy is respected, there are opportunities for us to benefit from a new kind of government data becoming available — the information that the government and public services collect or generate about each and every one of us: our health records, tax and welfare data, data from the education and justice systems; data we each regard as highly personal.

Isn't it our data? Don't we have a right to it? In the same way in which we can access our bank, shouldn't we be empowered to access this information digitally and in a secure manner? And while we are at it, what about the data that business holds on us all? The right to our own individual data is likely to become a significant area of debate and, ultimately, legislation in the next few years.

The Information Age is creating a new landscape. The new goods and services that will be fashioned out of the 21st century's data will offer huge opportunities and, of course, new challenges. There are those who fear a database state — where only the powerful have access to data and use it to spy and snoop. In fact the internet and web, as well as the falling cost of ever more powerful personal computing devices, have democratised data. This centrally gathered data, when distributed, is a new public good, a new economic and social resource. The UK is well placed to exploit it to the benefit of the country at large and each of us individually.

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