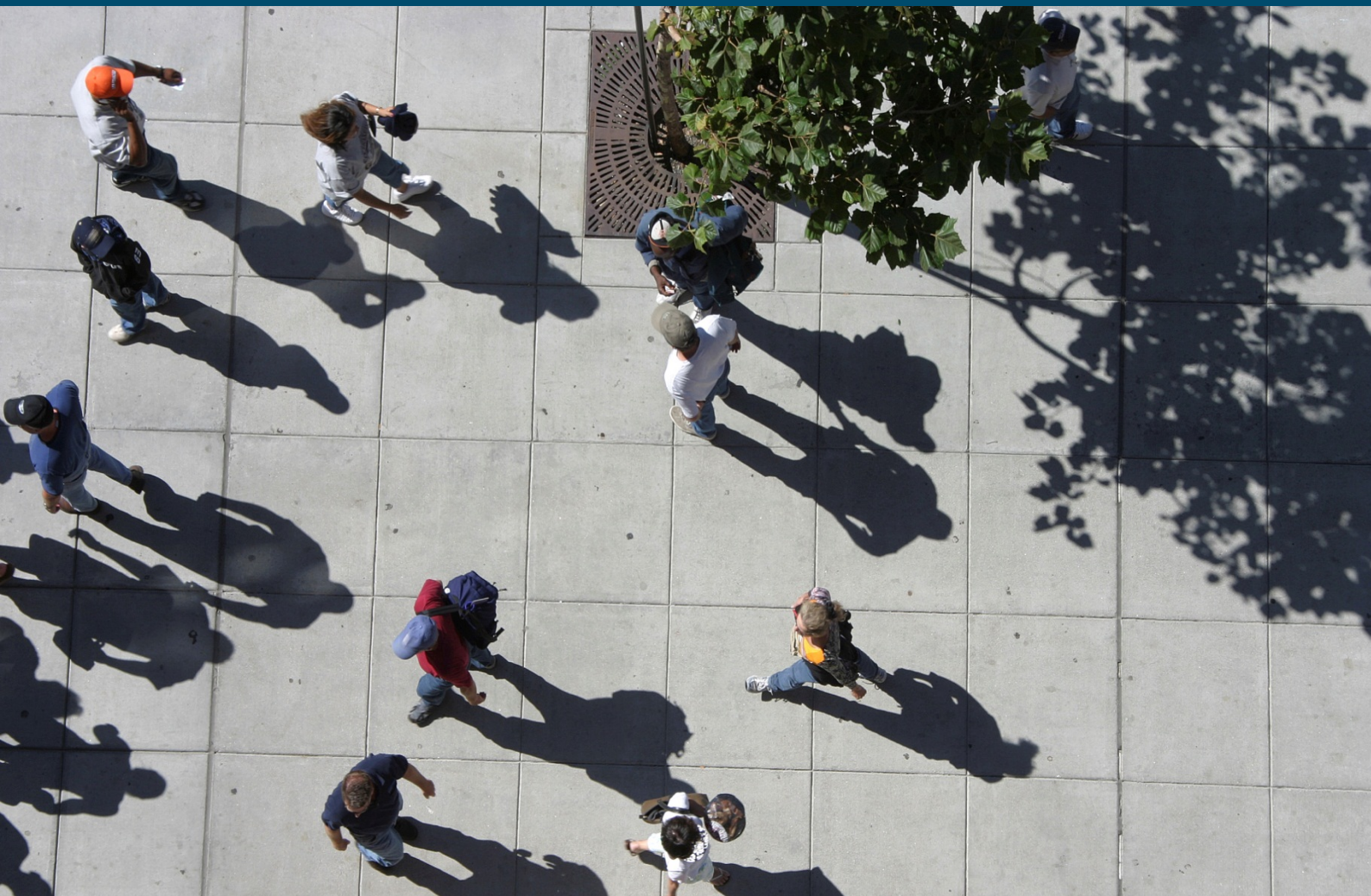


The Data Manifesto



What steam was to the 19th century, and oil has been to the 20th, **data** is to the 21st. It's the driver of **prosperity**, the revolutionary resource that is **transforming** the nature of social and economic activity, the **capability** that differentiates successful from unsuccessful societies. The Data Manifesto of the Royal Statistical Society is aimed at helping government understand what it can do to **make the most** of the data opportunity.

Data for better policy making

There is a great opportunity for more efficient and effective policy making if we use data to inform what we are doing.

- 1** Evidence must be taken more seriously in policy formulation and evaluation, and **official statistics should be at the heart of policy debate**. Making policy when resources are tight is difficult but choices should take into account the probable quantified consequences of alternatives. There should be further investment in investigating what policy works, including through the 'What Works' centres. Government should publish the data and evidence that underpin any new policies it announces, and should also commit to regular and long term evaluation of policies. Where we lack the data to inform choices between options in important policy areas, we should invest in getting it.
- 2** Greater **data sharing between government departments for statistics and research purposes** would provide opportunities for a range of public services and policy areas ranging from 'smart cities' to better healthcare. Our research shows that the public supports data sharing if it is done for the public good by organisations trusted to safeguard privacy and confidentiality. The case needs to be made positively if we are to avoid the worst of all worlds. We will have poorer analysis if people can opt out when they have nothing to fear and yet much to gain (e.g. from medical research). There may also be a loss of trust if information is used in ways people do not support and yet feel powerless to stop (e.g. blanket powers to access personal data for purposes that could infringe individual liberty). Privacy safeguards should be built into any sharing of personal data at the outset, and should be sufficient to ensure organisations and individuals do not choose to opt out. Data should also be made available to accredited research institutions through mechanisms such as the Administrative Data Research Centres, which are subject to testing and oversight of the robustness of their privacy protections. There should be more detailed reporting of cases where personal data is shared with companies, as this is the area on which the public most want reassurance.
- 3** Politicians, policymakers and other professionals working in public services (such as regulators, teachers, doctors etc.) should be given **basic training in data handling and statistics** to ensure they avoid making poor decisions which adversely affect citizens.



Data to strengthen democracy and trust

Our democracy relies on the quality of data in the public domain, and the public's trust in it.

- 1** To maintain public trust in statistics, we should **end the practice of pre-release access** whereby some people in government see statistics before the public. Ministers and public officials should handle data with integrity, in accordance with the guidelines in the Ministerial Code. The independent UK Statistics Authority should continue to play a key role in public policy, its advice on official statistics heeded and the gold standard set by the National Statistics brand should be widely valued. To build the public's trust around use of their data, the independent Information Commissioner's Office should be better resourced, with a sustainable funding base and greater powers to audit compliance and punish bad practices.
- 2** Citizens should have greater **access to good-quality local data**. The availability of crime and accident data has shown local communities are interested and engaged when the data is relevant to them. Central government should encourage greater publication of data at local level and build on good practice such as www.police.uk, www.datashine.org.uk and Local Government Inform.
- 3** The **private sector** also has an important role to play in sharing and opening their data. Companies should be encouraged to share data with researchers for research purposes, to share the data they hold about individuals with those individuals, and to publish open data for everyone, for the public good. We would like to see the rigour shown around official statistics in the public sector, and financial statements in the private sector, extended to other crucial information sources, such as the clinical trials reported by pharmaceutical companies. Private schools and hospitals and other public services provided by private providers should adhere to the same data standards and transparency as those in the public sector.



Data: the driver of prosperity

Our wellbeing depends on economic prosperity, which in turn depends upon exploiting our investment in data, and on our skills as a society to understand and use data.

- 1 Investment in research, science and innovation** is a key to long term economic development, and all science (including social science) is underpinned by data. Our international competitors increasingly recognise the opportunities presented by research and innovation, and on average invest more highly in it than is the case here. In the UK in 2012, overall R&D expenditure from government, businesses and charities was 1.7% of GDP and has been declining since 2000. A report published by the government in 2014 found that this is out of step with comparator countries internationally, where investment is on average 2.9% of GDP. The government should commit to increased investment in research and innovation to keep pace with other leading scientific nations. This should be accompanied by a 10 year strategic framework for science and innovation.
- 2** We need to progress more quickly on **opening up government data**. Open data can be a rich source of innovation at relatively little cost – particularly if it is effectively marked with standard codes for geography, time and other attributes. We look to the government to open up addressing and geospatial data as the core reference data upon which society depends, and also act as a catalyst to release economic value from other open datasets. We look to the government to open these up. And in future if public entities are privatised, their underlying data should not be lost to the public good like Royal Mail's Postcode Address File. Newly privatised bodies should be put under contract to maintain and publish the data as open data.
- 3** As a nation we need high quality information to help government, businesses, families and individuals make the right decisions. In an era of new types of data, the **Office for National Statistics (ONS) and the wider Government Statistical Service must be given adequate resources** to develop new ways of making data easily accessible to business and policymakers, educational institutions and civil society. Government statisticians are currently stretched in trying to deliver their core products, and the retention and improvement of statistical series need more support. Resources to understand how to use new types of big data and to unlock the potential of administrative data must additionally be prioritised. Staff in the ONS should be trained and equipped to manipulate data in the most cutting-edge ways, and should use the most efficient and least costly



means of transmitting data. Those providing and requesting data from the ONS should benefit from having the most open, flexible and user-friendly access to data in electronic form. With these improvements, we can look to the ONS to lead across government on improving and expanding the use of data for better decision making in the public policy sphere.

- 4 To prepare for the data economy we need to **skill up the nation**. The Nuffield Foundation found in 2010 that across 24 countries, England, Wales and Northern Ireland had the lowest level of participation in the study of any kind of mathematics post-16. This has a severe impact on higher education and employment. Recent rises in A Level Mathematics participation are welcome, but wider improvements are needed. We need to train teachers from primary school through to university lecturers to encourage data literacy in young people from an early age. Basic data handling and quantitative skills should be an integral part of the taught curriculum across most A level subjects. We should also put resources into making sure the new mathematics A levels, and Core Maths for those who don't wish to take A level mathematics, deliver appropriate statistical skills. In particular, we should ensure that all students learn to handle and interpret real data using technology.

For any further detail about the policies we are advocating, please contact our Policy and Research Manager Olivia Varley-Winter (o.varley-winter@rss.org.uk).

If your organisation is interested in supporting our Data Manifesto and working with us to achieve its aims, please contact our Executive Director Hetan Shah (h.shah@rss.org.uk)



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The Royal Statistical Society
12 Errol Street
London EC1Y 8LX
020 7638 89 98

rss@rss.org.uk
www.rss.org.uk
www.statslife.org.uk

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