**Current situation**

This strategy is fundamentally about the relationship between the citizen and the state. Central to any successful relationship is trust. How government stores and uses data is critical to this.

Data is driving fundamental changes in our daily lives and in the economy. The ability to make easy data-driven decisions is becoming vital to the way that we all live and work. This should be the way that government provides services.

Data is a critical resource for enabling more efficient, effective government and public services that respond to users’ needs. It is the foundation upon which everything else rests. Government holds datasets with a range of different characteristics. Some of this data is unstructured and some contains personal data relating to individual citizens. Other data sets contain information that is collated and curated by the government on behalf of the nation, such as lists of schools and hospitals.

When government makes effective use of data, we make better policy and deliver better, more tailored services for users. For example, data can be used in real-time by front-line staff to ensure the person they are serving gets the best possible support to meet their needs. Increasingly, government will be able to use predictive analytics to anticipate demand for services or policy changes and to prepare to meet citizens’ and businesses’ changing needs, informing government’s decisions on what services to offer and how they should work.

Sharing private data between different parts of government has significant benefits for citizens and businesses and is critical to delivering many essential services. Government must be more transparent about how we use data to develop policy and deliver services. We must earn and retain the trust of citizens and provide reassurance that personal and sensitive data, such as health data, is treated safely, securely and ethically within appropriate governance frameworks. When we do share data, we must ensure that it is appropriate and done in such a way to ensure citizens’ privacy.

The pace of technological change means we can use ever more sophisticated, data-driven approaches to tackle our biggest public policy challenges. Technology offers huge opportunities to achieve better policy and service outcomes for citizens. However, while an approach might be possible technologically, it might not be appropriate for government to use it. As we transform government, we must ensure we retain public trust and confidence in our use of data.

Delivering public services more effectively and efficiently requires joining together data from multiple public sector bodies. Across government, private data is already being harnessed to improve the quality and effectiveness of our policies and services, resulting in better outcomes. Online processes to apply for a passport, a driving licence, a Blue Badge or many other government-provided services depend on the connection of data held by different public agencies. The convenience and cost-effectiveness of these digital services are felt by individual citizens and society as a whole. They would not be possible without the ability to share data securely within government.

In October 2016 we launched the National Cyber Security Centre (NCSC). In November 2016, we published the [National Cyber Security Strategy](https://www.gov.uk/government/publications/national-cyber-security-strategy-2016-to-2021). The NCSCsupports local government, health and the wider public sector (as well as advising the third sector). The government is taking steps to further reduce the levels of cyber security risk in its supply chain by requiring many suppliers (such as those which handle sensitive or personal data) to adopt the [Cyber Essentials scheme](https://www.gov.uk/government/publications/cyber-essentials-scheme-overview), which provides organisations with basic protection against the most common internet threats.

There are many challenges in making better use of government data. It is frequently stored and used only within the organisation that collected it, with sharing under legal constraints limited by old technology.

While sharing data should be needs-based and proportionate, it is too difficult to work across the public sector (including ministerial departments, the health system, local authorities and devolved administrations) to provide better services, deliver on our policy promises and to operate efficiently.

However, much of the data government holds is not personal or sensitive data. Rather, it is information the government holds on behalf of the nation, such as a definitive list of schools in the country. Information like this has to be accurate, reliable and easily accessible for those who depend on it, whether they are businesses, public agencies, voluntary sector organisations or individuals.

Among the most important data in a modern digital economy is geospatial data - the core reference data that enables things to be linked to a physical location, such as data maintained by Ordnance Survey. In the UK we have high-quality geospatial data that is available for consumption in a wide range of formats and digital services, in many cases as open data.

This government was elected in 2015 with a manifesto committing the UK to being the most transparent government in the world. We continue to work internationally on open data and transparency and are a founder member of the D5 group of countries - five of the world’s most digitally advanced countries.

We will also ensure that we have the right people with the right skills and capabilities to manage and analyse data effectively. [Read more about people, skills and culture](https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020/government-transformation-strategy-people-skills-and-culture).

**Priorities until 2020**

We will enable better use of data by addressing the technical, ethical and legal issues, specifically focusing on the following priorities:

* making better use of data as an enabler for public services, particularly where those services cross organisational boundaries
* removing barriers to effective data use by all parts of government through the data sharing provisions of the Digital Economy Bill, once it is passed by Parliament
* make better use of data to improve decision making, by building and expanding data science and analytical capability across government, for analysts and non-analysts alike
* managing and using data securely and appropriately, ensuring that public sector workers understand the ethics of data sharing - including what is and what is not permissible
* building a national data infrastructure of registers (authoritative lists that are held once across government) and ensuring that they are secured appropriately
* opening up government data where appropriate
* continuing to open up government services internally and externally through the use of APIs where appropriate
* improving data discovery tools for users both within and beyond government
* transforming the way that government’s major repositories of data are stored and managed

The European General Data Protection Regulations are intended to be implemented across the UK by May 2018. These will change the standards and responses we must have in place to manage and protect the personal data of citizens. The Department for Culture, Media and Sport (DCMS) will work closely with the Department for Exiting the European Union (DExEU) on implementation of these regulations.

**How we will do this**

**Removing barriers to effective data use in government**

Through the Digital Economy Bill we are in the process of modernising legislation to enable data access for defined public interest purposes within government. At present, data sharing between public agencies takes place via a large number of bespoke, bilateral legal gateways. The Digital Economy Bill will enable the better use of data across government and the economy. Currently at House of Commons Report stage, the bill provides new legal mechanisms to support better use of data for targeted interventions, tackling fraud error and debt, the sharing of civil registration information and producing better statistics and research.

**Make better use of data to improve decision making**

We will:

* set up teams of our best data analysts and behavioural scientists to tackle cross cutting policy and operational issues, working alongside policy developers to deliver predictive models that inform and provide a stronger evidence base to underpin important policy and business decisions
* give professional analysts producing our national and official statistics much better, secure access to an array of administrative and other new sources of data which will benefit the wider UK data infrastructure as well as the UK statistics system, enabling better, more well-informed decision making, more efficient data collection, processing and dissemination, and less administrative and financial burden on those who are required to respond to government surveys
* deliver fresh statistical insight on social and economic change, in more relevant and timely ways through new and better statistical sources, informing public debate and policy-makers much earlier than is currently possible
* embed behavioural insight thinking and practice in mainstream policy making - there are now 15 UK government departments or agencies that either have their own behavioural insights unit or individuals appointed to co-ordinate behavioural insight activities, or have commissioned projects from the Behavioural Insights Team directly
* invest in building data science and analytical capability across government, for analysts and non-analysts alike

**Managing and using data securely and appropriately**

We will:

* appoint a new Chief Data Officer for government to lead on use of data
* set up a new Data Advisory Board to align efforts to make the best use of data across government, which will oversee a number of examples of better use of data and areas where we can build momentum
* provide public sector bodies with the necessary guidance to ensure they can make best use of data while adhering to best practice in the management of data including its collection, storage, access and analysis
* provide assurance that decisions made on the basis of data insight and analysis are compliant with the very latest best practice and standards
* reassure citizens that government is using data in the best way possible to improve the lives of individuals and the efficiency of services while behaving responsibly and appropriately
* uphold our duty to keep personal and sensitive data safe and secure, working across government to embed common security standards that keep pace with advances in technology and implementing the recommendations of Dame Fiona Caldicott’s [Review of Data Security, Consents and Opt-Outs](https://www.gov.uk/government/publications/review-of-data-security-consent-and-opt-outs) in health
* make it easier for citizens to view and, if necessary, correct data about themselves when using transactional public services
* adhere to and continue to refine a set of ethical principles for the use of data science techniques in public services, for use across government

HMRC’s Making Tax Digital for Business programme plans to make intelligent use of data to reduce the burden for business users. [Read how they will stop users having to complete separate tax returns](https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020/government-transformation-strategy-appendix-case-studies) or provide HMRC with information they have already given.

**Creating registers**

We will improve government data by creating a linked ecosystem of trusted, resilient and authoritative lists. We call these registers. These will ensure reference data is easy to create, maintain, discover and use. As a single source of data, registers will be secured appropriately, in line with their criticality to other services.

We will work with relevant departments and agencies to deliver the first tranche of these registers, starting with domains for which the user need is greatest ([see the list of potential data registers](https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020/government-transformation-strategy-appendix-list-of-potential-data-registers)).

We will provide multiple access routes to registers based on clear user needs, including APIs, download options with automated update mechanisms, and integration guidance.

We will create tools that make registers easy to use within the public sector and beyond. This will include feedback loops to enable data owners to crowdsource data cleaning and validate proposed changes, as well as flexible register update tools designed to integrate easily with data owners’ existing processes. This work will drive and support data quality at all levels, underpinning citizen trust in government data with robust, provable integrity and authority, and helping services provide consistent user journeys using core data.

We will deliver better services and drive innovation by ensuring the use of high quality, authoritative address data across the economy. We will continue to explore options for achieving this.

We have already delivered the [country register](https://country.register.gov.uk/) and are considering the case for additional registers from across different departments, including [territories](https://territory.alpha.openregister.org/) and the constituent units of the UK, local authorities in England, types of local authority and schools in England.

Other potential registers are shown in the [list of potential data registers](https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020/government-transformation-strategy-appendix-list-of-potential-data-registers).

**Opening up government data**

We will:

* engage widely with current and potential data users in the development of our open data agenda, in order to ensure that our work meets users’ needs and that limited resources are focused on high-priority areas
* tap into leading-edge thinking on data innovation through the Data Steering Group
* where appropriate, release open government data to spur innovation and economic growth, including additional, higher quality contracting data through our commitment to the Open Contracting Data Standard for all contracts administered by our central purchasing authority, the Crown Commercial Service (CCS)
* implement our third Open Government Partnership national action plan, which sets out ambitious goals for open government in the UK, and promote the Open Government Partnership, advocating transparency, open data principles, good governance and new economic opportunities worldwide

**Improving data discovery tools for users both within and beyond government**

We will improve the experience of publishing and accessing open data, enabling a shift in behaviour towards better open data management. This will lead to the provision of higher quality data, offering more relevant results when searching for government data.

Better management of open government data will improve the experience for end users (those working in policy, service teams and the private and civil society sectors) by making data easier to find and use and available in consistent structures and formats.

We will meet citizens’ expectations that we store and process their data in a way which is secure and which protects everyone from misuse and fraud.

**Transforming the way that government’s stores of data are held and managed**

We will explore if we can transform the way that the public sector holds and processes data. We are especially interested in large organisations that are effectively data custodians or registrars, particularly where these offer the opportunity for greater economic growth or prosperity, or greater efficiency/lower operating costs.

For example, as announced in the Autumn Statement 2016, we have decided that HM Land Registry should focus on becoming a more digital data-driven registration business and to do this will remain in the public sector. The Land Registry will be transformed into a modern registration business, with the ambition that it will become the world’s leading land registry for speed and simplicity.