



Research Data Scotland: Strategy

Unlocking data, improving lives

Vision

Our vision is to promote and advance health and social wellbeing in Scotland by enabling access to public sector data about people, places and businesses, and creating the conditions for collaborative data-driven research and innovation in the public good using that data.

Mission

To achieve our vision, RDS needs to coordinate access to the excellent data already collected about people, places, and businesses in Scotland. Helping researchers and analysts to access that data in a timely and cost-effective way, enable working across boundaries to collaborate on common datasets, and access the analytical tools they need to bring cutting edge insights that inform great decisions. We will enable research on different scales: from large international studies to simple and quick analyses of individual datasets, and support researchers to use the latest data science and geospatial approaches.

RDS will build a portfolio of research data assets that are held securely with public support and enable these datasets to be up to date and accessed at pace. RDS will introduce new services that help organisations to understand the impact of their decisions and so better improve wellbeing and equalities in Scotland.

Unique role

There now are a number of Trusted Research Environments across the UK that provide secure computing environments to hold and process research data and services for researchers to access those data. We are looking to align data access and Information Governance processes across the UK to simplify the experience of researchers. As such, where Research Data Scotland can stand out is in the range of research data, and data services it can offer, building on the expertise already around Scotland. The ability to create household and inter-generational administrative research data assets is currently unique.

Values

These values will steer our decision making, and are those we expect employees, partners, associates, and Board members to uphold.

We act with **integrity**: we keep front and centre of our work the public value of the decisions we are supporting through data and intelligence acting in honourable ways in our decisions at all times.

We are **transparent**: we will proactively share information, insights and innovations so that we learn faster together and build trust in what we do.

We act with **courage**: we believe that we can make things better, will be prepared to try new things, embrace ambiguity and challenge the status quo to create a new and thriving service that benefits the public, public bodies, the 3rd sector, scientific discovery and industry.

We are **collaborative**: we deliver better results when we work in a truly interdisciplinary and "once for Scotland" way, and are transparent and respectful of how we keep the public informed about use of their data

We act with **humility**: we have a lot to learn from others; and aim to be open-minded about the gaps in our knowledge, led by listening to the users of our services, our partners, and the public.

Principles

There are seven principles which underpin our mission aiming to engender public trust:-

1. RDS will only enable access to data for research that is for the public good and considers equalities
2. RDS will ensure that researchers and RDS staff can only access data once it is deidentified
3. RDS will ensure that all data is always kept in a controlled and secured environment, using the FAIR principles of **F**indability, **A**ccessibility, **I**nteroperability, and **R**euse of digital assets, and building upon the [5 safes data privacy framework](#)
4. RDS will be user and problem led not data led.
5. As a charity, all income that RDS generates will be re-invested into services to help researchers continue to access data, and firms that access public sector data for research in the public good through RDS will share any commercial benefits back into public services
6. RDS will be transparent about what data has been made available for research through its services and how it is being used for public benefit
7. Aligned with the Scottish data strategy, we will support people's appropriate choice over the use of their data in research.

Objectives

The economic, environmental and economic challenges facing us today are without boundaries. Addressing them requires collaboration ; between people, ideas and evidence. It requires the evidence to help understand the root causes of problems, the insights to formulate strategies to address these problems, and the evidence to learn whether those approaches are effective and adjust where necessary.

Scotland has world class data, but our data isn't held around people, places and businesses, it is locked away in lots of individual systems, distributed across organisations, and isn't in a format that makes access or integration of the data easy. The processes currently in place to access data are also overly complex. Access takes too long, meaning much potential research doesn't happen, and there is significant cost for research that does.

Data quality in Scotland is sometimes below the standards needed for useful insight and learning, with many manual processes in its management. Indeed, collecting data is

expensive, and improving and reusing what we already have will make the most of the investment in collecting this data.

There have been initiatives to address these issues, though these have lacked clear leadership and have been overly complex in their arrangements. The Scottish Government has committed up to £25 million to support RDS in achieving this vision and mission by 2026. By then, we need to have:

- Undertaken significant service transformation that makes the process of data sourcing from data controllers and its curation, and researcher access and linkage quicker and cheaper whilst maintaining public trust.
- Made available a much wider range of data and curated linked research data resources,
- Developed a wider range of valuable data services.
- Created a simpler data governance model that clarifies what kinds of use can be rapidly approved, enabling researchers then to design projects which fit with the requirements of data owners. We need to have established greater consistency between data owners in their position on appropriate use of the data.
- Worked collaboratively with Scottish Government, HDR, Regional Safe Havens and other partners to define and realise improved Information Governance and data access processes in Scotland that align with other services within the UK.
- Supported the federation of Trusted Research Environments and datasets to maximise data security and minimise the time to access datasets from multiple data controllers
- Developed a sustainable model for running and continually developing RDS services.
- Established ourselves as the Scottish researcher data service of choice to UK research funding bodies, partnering to bring in significant investment to Scotland and being seen as an international exemplar of a secure research data service.
- Tangible further examples of investment into Scotland because of the RDS offer. This requires RDS to work with Scottish Government, Scottish Trade International and several other partners to establish a data driven innovation offer to potential investors that is rooted in use of data for public benefit.

Scottish Ministers investment is in a “once for Scotland” approach. While the organisation is set up to enable improvements to health and social wellbeing, doing so will require data far beyond healthcare. As such, we need to be developing datasets, associated services and improving the quality/speed of access and use together with others across Scotland who provide similar services, and simplifying the processes and routes for access to data for researchers. Our model will be one where RDS provides system leadership and co-ordination,

contracting with specialist partners. By doing this once for Scotland, where appropriate, this allows other partners to focus on the strengths and expertise they uniquely bring. We will be pragmatic and tactical in this approach by taking decisions that will benefit the whole rather than a single organisation. As a first step, we have established a collaboration agreement to enable this with Scotland's Regional Data Safe Havens that bring together Universities and the local NHS to provide a range of services around detailed healthcare data.

The Key Performance Indicators (KPIs) are included in the 2022-23 business plan¹. They quantify our ambitions for a future where a broader range of researchers are accessing data more quickly, that formal enquiries turn into projects more often because users can understand what is possible and how to access the data they need. Our KPIs also set out our ambitions that there are a much wider set of high-quality research datasets being used to provide new insight to uncover problems, and identify opportunities, with those findings being influential both in Scotland and more broadly in improving wellbeing. And the unique data resources we have in Scotland start attracting international investment and high paid work in collaborative research,

In terms of **how** we will deliver, we need to:

- Ensure that the public supports the approaches we are taking through robust and systematic public engagement and transparency.
- Engage with groups representing privacy concerns.
- Establish a range of collaborative arrangements that make the most of the data and expertise we have in Scotland.
- Be user led in how we develop new services and data offerings.
- Take every opportunity to promote inclusion and equality
- Continue to look internationally for best practice in running a Trusted Research Environment and an innovating data organisation.

Scope

As important as explaining what RDS will do, is explaining what RDS will not do.

The core ambition for RDS is to make the most value from the datasets already held by public sector organisations by improving the visibility of this data and streamlining access for its use.

¹ The 2022-23 business plan can be downloaded alongside RDS strategy researchdata.scot/about-us

RDS is not going to take primary responsibility away from data owners to ensure and improve the quality of the data they collect. However, as RDS works with many data controllers, there may be differences seen in data quality. In this situation, we could provide feedback, and of course we will help with the production of metadata to allow people to find and better understand datasets.

RDS is also not a research organisation. We facilitate access to public sector datasets for researchers but will not conduct or publish analysis of those datasets directly. For organisations without sufficient analytical capacity or where the data controller specifies, we can offer an analytical service through our partners, but this is the exception.

RDS is not planning to publish aggregated datasets from the granular data about a person, place, or business. There are excellent websites such as statistics.gov.scot and opendata.nhs.scot that do this.

The system we're aiming for

Partners

Scottish Ministers have invested in RDS as a “once for Scotland” approach. They are expecting us to simplify the system by providing platforms, policies and approaches that give confidence to data controllers, researchers, and the public, and reducing cost and friction wherever possible.

We will look to develop partnership arrangements with other organisations in Scotland who provide data access services, both with the intention of federating data, and of enhancing the range of services available. This is an area that needs to be developed, and we need to ensure we are scanning the landscape regularly for emerging developments to avoid fragmentation.

We will simplify arrangements between partners: in the brands used to describe our services, in the services delivered, and in our organisational structure.

Services

We will need to build on the existing three services provided by the **electronic Data Research & Innovation Service (eDRIS)** team in Public Health Scotland: making system wide changes that reduce the costs of delivering those services, lower current barriers to accessing data and widen the range of people and organisations who can use these services. We must improve service quality by taking actions such as improving available metadata, and providing synthetic datasets that allow researchers to test approaches, and write code that analyses data while

necessary permissions are secured to use actual data. We will work with eDRIS to review their pricing model. We will also want to have differential services for experienced or new researchers.

Building on the experience of Scottish Government and National Records of Scotland, there are better ways to work with data controllers to make datasets available. A **data sourcing service** is needed to optimise how this is done, both for the initial set up of data ingestion and regular updates, as well as creation and maintenance of metadata. We will need to work out the arrangements with data controllers for their time in making their data available.

Enabling organisations to bring their own data and link that to existing RDS managed datasets can be of significant value. It can help organisations better understand their users, e.g. linking to data on protected characteristics could help an organisation to understand how fair access to or outcomes from their service are.

Another use of this **connect your data service** would be to help organisations understand the difference they are making. The Ministry of Justice in England provides a service to local public and 3rd sector organisations to share data of who they have been working with and get in return a picture of the effect their intervention has on reoffending.

There may be a range of other potential data services. We would do market research to establish options and appetite for valuable new data sets, linkages and analyses.

Users

The RDS service is for researchers and analysts across academia, Government, public bodies, 3rd sector and industry. This service is aimed at people supporting decision making about people, places and businesses in Scotland. For those interested in Scottish data, RDS has a unique national role, as the only organisation enabling access to as wide a range of datasets.

RDS will also provide services to researchers who are seeking data about particular subjects that are only available through RDS. This is likely to be from the academic sector, potentially in partnership with industry. Here, people will come to RDS if the data is available, the process for access is straightforward and the analytical environment is good enough.

Data

The vision for data is to build access to a portfolio of data assets around people, places, and businesses that are held securely with public support and accessed at pace. This data would be federated between significant data holdings in Scotland and the UK.

We will work to make available for research a core set of national data assets. This includes

- Vital events (including the outputs from digitising Scotland project)
- Interaction with “universal” public services, in particular GPs, other healthcare, and schools.
- Population censuses
- A picture of the protected characteristics of the population
- A register of Scottish based/operating businesses
- Property ownership and transactions
- Land use
- Scotland wide household surveys

We then enhance this set, driven by needs of users, around five themes: **equalities, Health & wellbeing, vulnerable people & families, inclusive growth, and protecting & enhancing the environment**. For these themes we will bring together important datasets, driven by user need.

While the focus for RDS is about case level data on people, places and businesses, there is a significant amount of open data that give researchers context, for example the Scottish Index of Multiple Deprivation, or prescribing data by GP practice. We will work to make key open data available in secure settings in ways that can be brought together with case level data. We will also work to make the metadata for key open data searchable as part of the RDS data catalogue.

Organising our data better opens up the opportunity to carry out research that would not otherwise have been possible. The building block of most of our sensitive datasets is data about people, but people live in family and household units, which shape people’s experiences. We know that there are many things that pass from one generation to the next which are key contributors in explaining people’s circumstances and outcomes. We will work with the ADR-Scotland SHIPP (**S**cottish **h**istoric **p**opulation **p**latform) programme as they explore how to establish these things and turn data access into a business as usual process.

Having linked data over time allows us to create cohorts that explore how the experiences for businesses and people change over time, particularly around significant transitions. We need to develop an approach to cohort creation, based upon user demand.

Businesses are staffed by people and they are sited in places across Scotland. Being able to link between people, places and businesses would allow researchers and therefore decision makers to understand more about how people live their lives, labour market and business dynamics, and many more issues beyond this. This relies on developing approaches to systematically maintaining those links. We will need to develop approaches that are affordable and proportionate, again based on user demand.

Approach

The 2022-23 business plan² for RDS complements this strategy by outlining the steps we are taking to move towards the vision in this strategy using its principles and values.

In broad terms, our initial focus will be on improving the speed and quality of the researcher data access service. We will put the way that data is governed, stored, and moved on a firmer footing, setting things up to enable us to work with new data controllers to widen the range of data available for researcher in the public good.

We will then switch to a focus on broadening the range of service users, particularly in the public and 3rd sectors in Scotland. We'll work with other organisations to take our offer beyond Scotland with the aim of attracting investment, and we will develop new services and valuable research data resources.

Throughout this transformative first stage of Research Data Scotland, we will be looking to reduce system costs where possible, broaden the range of investment in RDS, and establish enduring charges for our services that help us to meet our vision – reducing reliance on a small number of funding organisations.

² The 2022-23 business plan can be downloaded alongside RDS strategy researchdata.scot/about-us