



OPENING UP

How data sharing is unlocking new possibilities for greater government efficiency, smarter decision-making, and better service delivery

Based on findings from a 2022 UK government data survey research report by Dods Research



INTRODUCTION

Over the last few years, and since the pandemic in particular, UK government has started taking data seriously. The appointment of Chief Data Officers for many departments, the foundation of the Central Digital and Data Office, the launch of the National Data Strategy, and the emphasis on data in the Declaration on Government Reform all indicate that government is putting data at the top of the agenda.

To find out how these high-profile strategic moves are influencing culture and practice throughout the civil service, SAS, Intel, and Capgemini worked with Dods Research to commission a comprehensive survey of officials at all levels of government.

The survey gathered responses from 11 major central government departments, with HMRC, DWP, MOD, and the Home Office leading the way. Respondents included a mix of senior leaders (**46%**), management (**23%**), and executive/administrative/other levels (**30%**).

While the survey questions focused on data sharing, responses came from civil servants in a broad range of roles—not just data professionals. Nevertheless, **91%** asserted that their department or organisation works with administrative, operational, or transactional data to drive decision-making, inform policy, and for other use cases.

The fieldwork for the survey took place in March 2022, just six months after the

publication of the National Data Strategy monitoring and evaluation framework in September 2021. Even within this short timeframe, **25%** of respondents attest that their department has already used or referred to the National Data Strategy to develop or improve data-related initiatives.

As this report will show, even for departments that are yet to engage directly with the National Data Strategy, the principles it espouses are clearly resonating at all levels of government. The benefits of data sharing are widely acknowledged, and departments know that it is the right thing to do. The challenge now is to clear the barriers that still stand in the way of cross-functional collaboration.



of departments work with data to drive decision-making, inform policy, etc

have already used the National Data Strategy to inform data initiatives



66 We will put data at the heart of our decision-making, learning explicitly from the approach we have taken in responding to COVID-19. We will set a presumption in favour of openness and a requirement to share data across departments, so that policies are informed by the best data analysis from across government. **99**

- Declaration on Government Reform, June 2021, Section 3.3

A CHANGE IN MINDSET

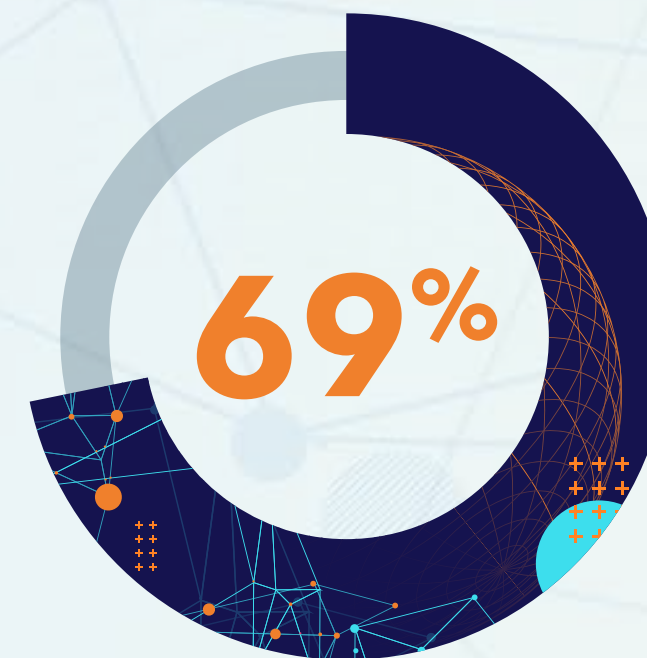
Prior to the pandemic, despite successive governments paying lip service to openness and transparency, UK public sector organisations generally lived up to the stereotype of being opaque, secretive, and intensely bureaucratic. Departments guarded their data jealously, and the legal or security risks of revealing information—even to colleagues in other areas of government—were usually believed to outweigh the benefits of effective collaboration.

One of the most surprising findings of our survey is how completely this mindset has changed. More than two thirds of respondents (**69%**) say that their department now collaborates and shares data with other government organisations, while only **5%** are certain that their data is not yet being shared. Even among those who don't share data, three quarters (**75%**) believe that data sharing would benefit their department's objectives.

Even more surprising is respondents' confidence that data sharing within government no longer poses insurmountable security or legal risks. Of respondents whose departments share data, three quarters (**75%**)

believe that they have the right governance in place.

Tellingly, when respondents were asked to name the biggest barriers that currently stand in the way of data sharing and analytics initiatives, "data security and privacy issues" (**29%**) only just made the top ten, while only **14%** picked "responding to policy and regulatory changes". This suggests that most civil servants are no longer questioning whether data sharing is safe or permissible. Their focus has shifted to more operational concerns—how to make data sharing work in practice.



of departments
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other government
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of departments
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CIVIL SERVICE VOICES: WHAT ARE THE KEY BENEFITS OF DATA SHARING?

1. Improved service delivery

- “Across HMG we have access to huge amounts of data that could be better used to predict, plan, and deliver services in [a] more efficient and cost-efficient way.”
- **DEPARTMENT FOR INTERNATIONAL TRADE**,
Senior Manager/Officer
- “The pandemic proved that joining up data allowed a better understanding of resident requirements, and service delivery was tailored to suit this.”
- **LOCAL GOVERNMENT**, *Senior Manager/Officer*
- “More effective analysis that gives better value for the taxpayer and improves care and outcomes for patients.”
- **NHS**, *Head of Department*

2. Improved decision-making

- “The key benefit for sharing data is the story it can help us tell to maximise the benefits, highlight a wider range of impacts, and make reporting on the data more efficient and accurate for decision-making.”
- **DWP**, *Manager/Officer*
- “Data transparency offers stakeholders [the] ability to view a problem or success on the same data set, [which] links to more cohesive working styles and decision making.”
- **HMRC**, *Senior Manager/Officer*
- “The fullest picture to make decisions.”
- **HMRC**, *Executive*

3. Improved efficiency

- “In simple terms: Record once, use many times. This reduces duplication of effort. It also improves data quality, as all individuals are using the same data source.”
- **MOD**, *Manager/Officer*
- “More efficient processes with less rekeying of data, better quality of data, and less time rediscovering data that is already known elsewhere in Government.”
- **MOD**, *Senior Manager/Officer*
- “Removal of opportunity for error and mismatch, removal of duplication and interoperability gains.”
- **DEPARTMENT FOR INTERNATIONAL TRADE**,
Manager/Officer

BREAKING DOWN BARRIERS

The survey findings suggest that today, the major roadblocks in the path of cross-departmental data sharing are not concerns about policy, security, or compliance—they are more practical, operational issues.

Two thirds of respondents (**66%**) cited the shortcomings of their department's existing technology infrastructure as the biggest barrier, while almost half (**45%**) mentioned budget restrictions. Several also mentioned other technology-related issues, such as integration (**38%**), and the flexibility of new and existing systems (**36%**).

If technology and cost are perceived as the biggest barriers, this is good news for data sharing initiatives. Technology issues may be complex, but they are rarely impossible to solve. And in recent years, the government has freed itself from many restrictive agreements with legacy technology providers, which means that adapting existing systems and implementing new ones is no longer prohibitively expensive.

Data platforms have also matured significantly over the past two decades, and the cloud now makes it possible to store and analyse data at much greater scale, more flexibly, and cost-effectively than ever before. The successful adoption of these technologies by some of the world's largest private sector organisations, including tech giants and financial services companies, suggests that it would be a perfectly feasible project to build a cloud-resident analytics and AI platform that provides governed access to curated data over a federated network of departmental information systems.

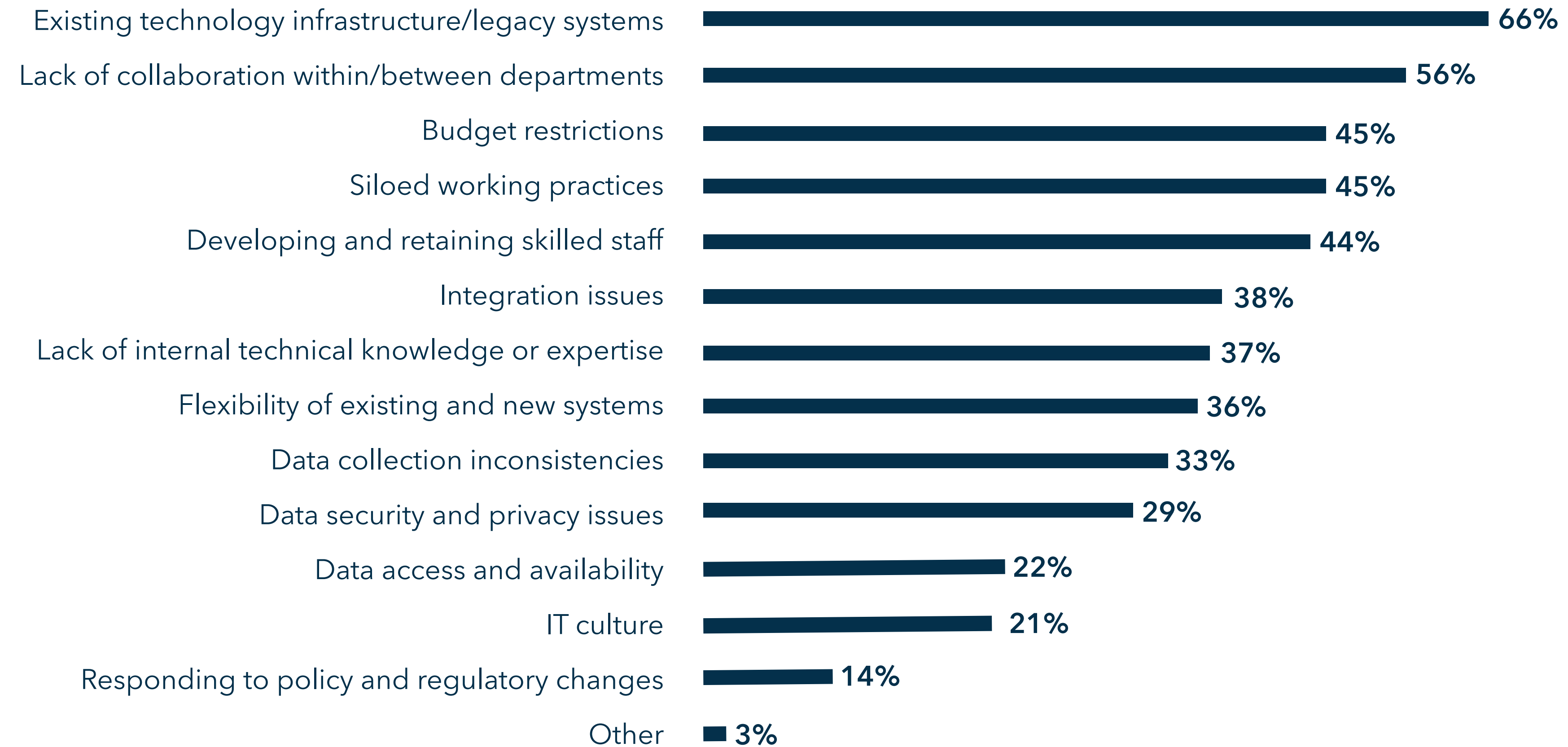
The second major group of barriers that respondents identified are organisational and cultural, rather than technological. More than half (**56%**) pointed to a lack of collaboration within and between departments, while **45%** called out siloed working practices.

While cultural change is always difficult, this may not be such an insurmountable obstacle as it currently appears. "Our departments do not share data because they are siloed" is just another way of saying "Our departments are siloed because they do not share data". If government organisations can find better technical solutions for data sharing, the flow of information will increase, and the benefits will become more evident—which should naturally lead to departmental culture becoming less siloed and more collaborative over time.

A third, and potentially more serious set of problems was around skills: 44% of respondents had concerns about developing and retaining skilled staff, while **37%** pointed to a lack of internal technical knowledge or expertise. This is a real issue, and not only within government. Data skills are in short supply on the job market, and government organisations may struggle to compete for top talent with private sector companies that are not constrained by civil service pay grades. The government's own report from last year **Quantifying the UK Data Skills Gap**¹, revealed that UK businesses are recruiting for up to 234,000 roles requiring hard data skills. However, UK universities are only expected to provide around 10,000 data scientists a year. So within government a focus on training existing resources and boosting data literacy within the service is likely to be the best option to build the skills required.

¹GOV.UK Policy paper (2021): Quantifying the UK Data Skills Gap - Full report

Key barriers to data sharing and analytics initiatives



CIVIL SERVICE VOICES: WHAT WOULD HELP DEPARTMENTS HARNESS DATA MORE EFFECTIVELY?

1. Better data collection

- 66 Reduce the number of initial manual collection points. 99
- HMRC, Executive
- 66 Consistency of data collation. 99
- DWP, Senior Manager/Officer
- 66 Validation of data takes place too late in the process. Data is validated before reporting and not at the point of collection. 99
- FOOD STANDARDS AGENCY, Senior Manager/Officer

2. Better infrastructure

- 66 [A] single data sharing system. 99
- MOD, Senior Manager/Officer
- 66 Better infrastructure around how the data comes in, moves around the department (transforms), and how it settles within the department. 99
- HMRC, Senior Manager/Officer
- 66 A more robust system that can be manipulated for any data analysis requirements. 99
- MOD, Administration

3. Better expertise

- 66 More in-house data science expertise. 99
- CAFCASS, Senior Manager/Officer
- 66 We need more expert staff. 99
- HMRC, Higher Officer/Technical
- 66 Better training. 99
- MOD, Administration



A FAILURE OF IMAGINATION?

The survey also investigated respondents' key priorities for the data initiatives within their departments. Once again, the results seem to support our interpretation that—perhaps due to the progress made during the pandemic—UK government departments have shifted their focus from the theoretical to the practical and operational aspects of data sharing.

The most common priority by a considerable margin was to improve operational efficiency. A large majority (**86%**) of respondents included operational efficiency in their top five priorities, and **47%** selected the related topic of cost reduction. Other big focuses were compliance (**51%**) and data/cyber security (**46%**).

These preoccupations all share a common theme: they focus on the internal implementation of data sharing. They are the types of concerns that teams have when they're working on a project: "How do we make this work?", rather than "What should we do and why?"

Meanwhile, bigger-picture concerns have slipped down the priority list. Delivering better value for citizens and residents (**43%**) only just makes it into the top 5; improving cross-departmental collaboration (**21%**) barely sneaks into the top 10; and building a trusted data regime (**20%**) comes in at 12.

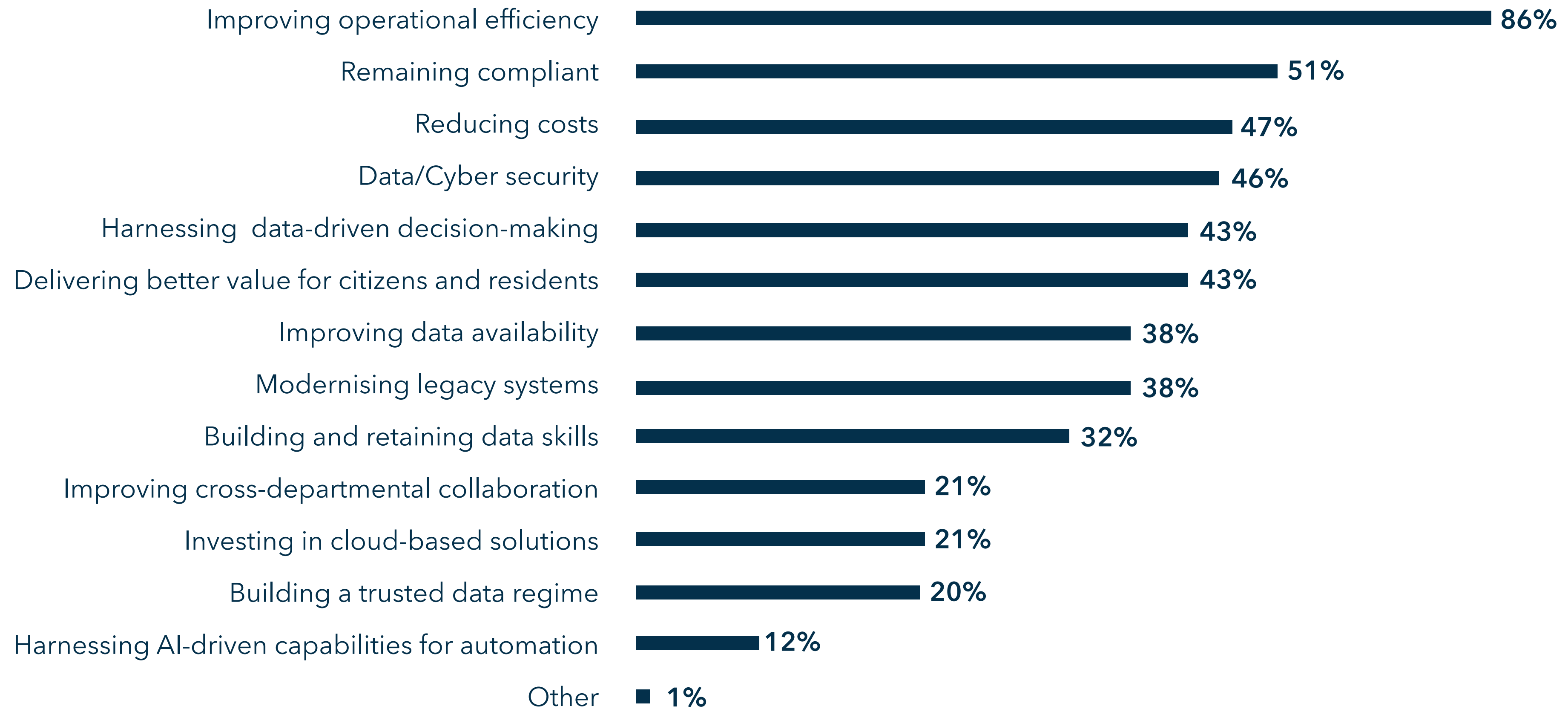
Perhaps this result is unsurprising—or even encouraging. The fact that many respondents are prioritising practical matters such as efficiency and compliance implies that they have already progressed from theory to practice.

On the other hand, it will be important for senior leaders to ensure that their departments do not lose sight of the larger goals of data-sharing, as expounded by the National Data Strategy:

66 Under this strategy, data and data use are seen as opportunities to be embraced, rather than threats against which to be guarded... [This] means driving a radical transformation of how the government understands and unlocks the value of its own data to improve a range of public services and inform decisions at scale, through a whole-government approach driven from the centre. 99

- NATIONAL DATA STRATEGY,
Foreword by the Rt Hon. Oliver
Dowden CBE MP

Key priorities for data and analytics initiatives



NOW IS THE TIME

66

The coronavirus pandemic showed how much can be achieved when government departments and the wider public sector share vital information to solve problems quickly. We have a duty to maintain that high watermark after the pandemic.

99

- NATIONAL DATA STRATEGY,
Mission Three

To build on the lessons learned during the pandemic and ensure that government departments do not slide back into an isolationist outlook on data sharing, now is the time for both senior leaders and individual departments to push things forward.

Leading from the centre

From a central perspective, fulfilling the vision of the National Data Strategy and the Declaration on Government Reform will require the right leadership, the right technology, and the right skills.

With the growth of the Government Digital Service and the establishment of the Central Digital and Data Office, we now have the right organisational structures in place. Building a government-wide technology platform to facilitate data sharing is called out by the National Data Strategy as a necessary next step:

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To succeed, we need a whole-government approach that ensures alignment around the best practice and standards needed to drive value and insights from data; and the creation of an appropriately safeguarded, joined-up and interoperable data infrastructure to support this. 99

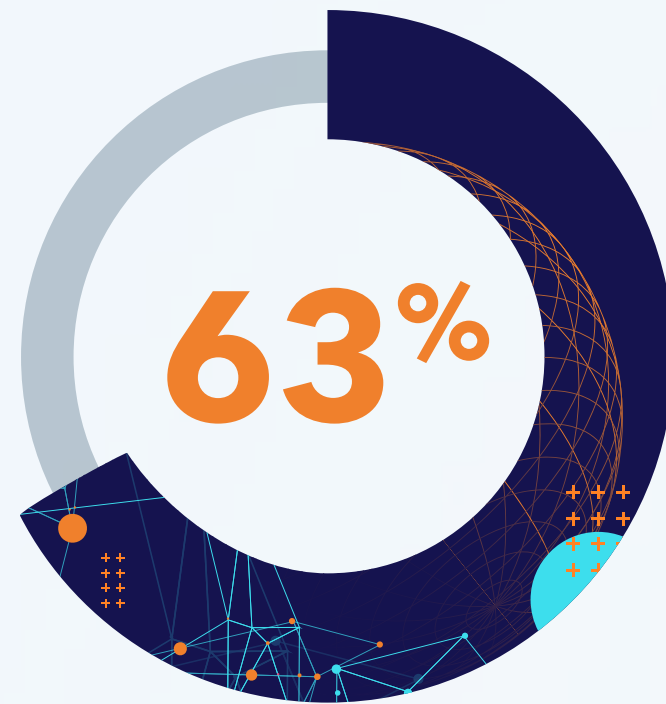
- NATIONAL DATA STRATEGY, *Mission Three*

Building solid foundations

From the perspective of individual departments, there is also foundational work that needs to be done to ensure that data sharing can truly deliver its potential. Our survey's respondents cite their top data priorities as:

1

To build a foundation that ensures data is fit for purpose



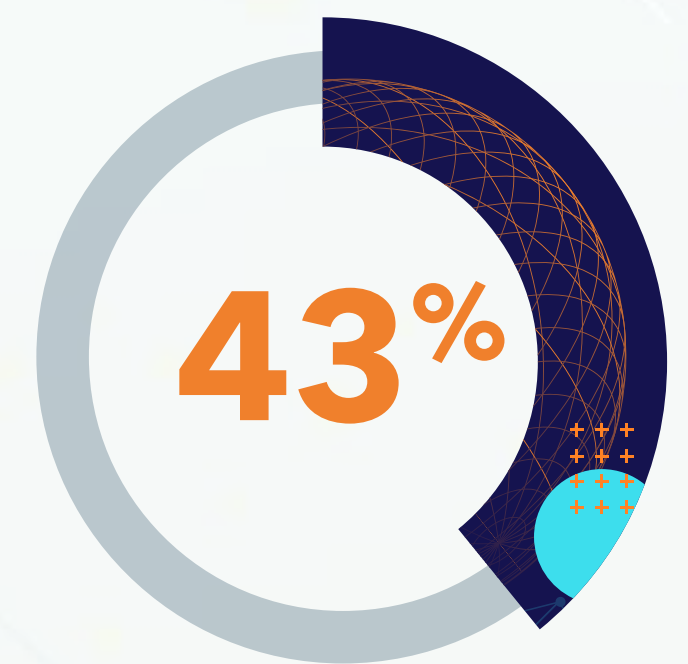
2

To build the right data skills to maximise its usefulness



3

3. To improve and promote data sharing across departments



These priorities will need to be delivered in this order, because data quality and data skills are prerequisites for data sharing to be successful. Or as one respondent somewhat bluntly put it:

“Sharing data without a proper information flow structure is pointless and inefficient. Sharing the right data that can be TRUSTED is the key.”

- DEPARTMENT FOR TRANSPORT, Senior Manager/Officer

If the required skills are lacking internally, departments can turn to expert partners such as SAS, Intel and Capgemini to help them establish a strong foundation for the future of UK government data sharing and fulfil the vision of the National Data Strategy.

BUILDING ON PROGRESS

Based on the findings of the survey, SAS, Intel, and Capgemini present three key recommendations for government departments looking to take the next steps on their data-sharing journeys and advance the objectives of the National Data Strategy.

1. Decouple data literacy from technical requirements

A significant number of respondents saw the lack of internal technical knowledge (**37%**) and the development and retention of skilled staff (**45%**) as serious barriers to data sharing. These issues are often exacerbated by non-standard technology choices: when teams cobble together their own data management infrastructure by integrating open-source tools, it creates a high bar to collaboration because nobody outside the department knows how the system works.

By contrast, adopting standard, well-documented commercial software makes it easier to find, hire and train people with the right skills, and reduces the risk that vital knowledge will be lost if key individuals leave the team. In effect, it allows departments to focus on improving data literacy rather than deep technical knowledge—and it democratises data management by empowering civil servants to focus on information and insight, not configuration and code.



2. Get a grip on metadata

The study revealed that most respondents' top priority was to build a foundation that ensures data is fit for purpose (**62%**). Data collection and validation were also key themes in the respondents' feedback on how their department can improve data sharing.

Experience has shown that one of the most effective ways to assure data quality is to ensure that data is properly organised, tracked, and governed using an enterprise metadata catalogue. This enables data stewards to classify and label data assets, ensure that sensitive fields can be anonymised or withheld, trace the lineage of each asset to show users where the data comes from, and certify the quality and completeness of information.

3. Embrace the cloud

Government departments are showing an increasing maturity and eagerness to improve operational efficiencies as they move from the theoretical to the practical. This is where the adoption of cloud-based data technologies can accelerate the pace of data sharing and collaboration.

Departments that lead the way in cloud data adoption can easily expand their operational footprint as demand for shared data increases, as well as rapidly prototyping new data-driven applications and services. This helps to create a culture where it's possible to implement ideas for data services quickly and without significant up-front investment. When a prototype is successful, cloud platforms make it easy to promote into production; and if an experiment doesn't work out, it can be shelved quickly without wasting additional resources.

FINALLY

Data is the foundation to move towards government efficiency. Once you have taken these three steps into consideration and ensure that your data strategy is robust and accessible for sharing; you can then start to see the value from your investment in data, AI and analytics technologies, enabling confident and smarter decisions for delivering better services to citizens.



LEARN MORE

Together, we can help your department align with the National Data Strategy and play your part in promoting data sharing throughout UK government.



About SAS

SAS is recognised as the global leader in AI and analytics, we deliver intelligent, automated solutions that can help UK government effectively transform a world of data into a world of intelligence.

Our technology is designed to not only empower government departments, but also to inspire the way in which the public sector operates, improving the processes and quality of data-driven decision-making whilst working collaboratively with other technologies and approaches. Achieve excellence in data, cloud-resident analytics and AI platform that supports diversity, enables scale and promotes trust in government. SAS gives you THE POWER TO KNOW.



About DODS

For more than 180 years, Dods has provided essential information and connections to the UK and EU political and public affairs sectors. With unique access to the corridors of government and public sector, Dods monitors what policymakers are saying and helps clients to navigate through the noise to find solutions to solve complex problems, mitigate major risks and secure competitive advantage. With neutrality and transparency underpinning everything we do; we are a trusted source of political intelligence and debate through our portfolio of political titles and our leading events, business intelligence and training services. Dods Group Ltd is part of the Merit Group plc.



About Intel

Intel is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to [intel.com](https://www.intel.com)

SAS and Intel collaborate extensively to make sure our world-leading analytics solutions, starting with SAS Viya, take full advantage of the latest capabilities of Intel hardware. Ultimately, that means front-line users of data enjoy lightning-fast access to timely insights - bolstered by advanced AI, machine learning and IoT capabilities. That's how SAS and Intel are enabling smarter organisations in every industry around the world.



About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 340,000 team members in more than 50 countries.

With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2021 global revenues of €18 billion.



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