Data Management Association of the UK (DAMA UK)

National Data Strategy consultation response

This document crowdsources DAMA UK member comments in response to the [UK national data strategy](https://www.gov.uk/government/publications/uk-national-data-strategy/national-data-strategy). This document is now closed for input. All comments are being reviewed and collated by a sub-committee and submitted as part of DAMA UK's formal response to the Government's [consultation](https://www.gov.uk/government/consultations/uk-national-data-strategy-nds-consultation/uk-national-data-strategy-consultation). DAMA UK will publish the final submission on our website.

# Quick links to consultation questions

[Q1. To what extent do you agree with the following statement: Taken as a whole, the missions and pillars of the National Data Strategy focus on the right priorities.](#_d9j1ejlzaqqm)

[Q2. We are interested in examples of how data was or should have been used to deliver public benefits during the coronavirus (COVID-19) pandemic, beyond its use directly in health and social care.](#_fzrmcs23ntj0)

[Q3. If applicable, please provide any comments about the potential impact of the proposals outlined in this consultation may have on individuals with a protected characteristic under the Equality Act 2010?](#_uflkj5fkihvr)

[Q4. We welcome any comments about the potential impact of the proposals outlined in this consultation on the UK across all areas, and any steps the government should take to ensure that they take account of regional inequalities and support the whole of the UK?](#_amfckb7mjdfo)

[Q5. Which sectors have the most to gain from better data availability?](#_o1pe2ku4i82t)

[Q6. What role do you think central government should have in enabling better availability of data across the wider economy?](#_gihhialf7iln)

[Q6a. How should this role vary across sectors and applications?](#_41q75alrnkw)

[Q7. To what extent do you agree with the following statement: The government has a role in supporting data foundations in the wider economy.](#_b2y1vsx7u9q8)

[Q8. What could central government do beyond existing schemes to tackle the particular barriers that small and medium-sized enterprises (SMEs) face in using data effectively?](#_lch2pasl7uzm)

[Q9. Beyond existing Smart Data plans, what, if any, further work do you think should be done to ensure that consumers’ data is put to work for them?](#_dtec9tk20y6r)

[Q10. How can the UK’s data protection framework remain fit for purpose in an increasingly digital and data driven age?](#_9fbl871064ri)

[Q11. To what extent do you agree with the functions set out for the Centre for Data Ethics and Innovation (CDEI) - AI monitoring, partnership working and piloting and testing potential interventions in the tech landscape?](#_m1udmssiucya)

[Q11a. How would a change to statutory status support the CDEI to deliver its remit?](#_ph0bci8qaca4)

[Q12. We have identified five broad areas of work as part of our mission for enabling better use of data across government. We want to hear your views on any actions you think will have the biggest impact for transforming government’s use of data.](#_dx0v4te8m6ey)

[Q13. The Data Standards Authority is working with a range of public sector and external organisations to create a pipeline of data standards and standard practices that should be adopted. We welcome your views on standards that should be prioritised, building on the standards which have already been recommended.](#_aeujotacjoma)

[Q14. What responsibilities and requirements should be placed on virtual or physical data infrastructure service providers to provide data security, continuity and resilience of service supply?](#_ndbj07cy8xyj)

[Q14a. How do clients assess the robustness of security protocols when choosing data infrastructure services? How do they ensure that providers are keeping up with those protocols during their contract?](#_vwvewrdpic47)

[Q15. Demand for external data storage and processing services is growing. In order to maintain high standards of security and resilience for the infrastructure on which data use relies, what should be the respective roles of government, data service providers, their supply chain and their clients?](#_ypj1uo3wsbda)

[Q16. What are the most important risk factors in managing the security and resilience of the infrastructure on which data use relies?](#_vtyeav74xosu)

[Q17. Do you agree that the government should play a greater role in ensuring that data does not negatively contribute to carbon usage?](#_lqskk4acuu34)

[Q18. How can the UK improve on current international transfer mechanisms, while ensuring that the personal data of UK citizens is appropriately safeguarded?](#_7syehf5jrnl5)

[Q19. What are your views on future UK data adequacy arrangements (e.g. which countries are priorities) and how can the UK work with stakeholders to ensure the best possible outcome for the UK?](#_h2bndc3bz944)

# Consultation questions

## **Q1. To what extent do you agree with the following statement: Taken as a whole, the missions and pillars of the National Data Strategy focus on the right priorities.**

**Please explain your answer here, including any areas you think the government should explore in further depth.**

* Strongly disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Strongly agree

***[DAMA UK submission]***

Somewhat agree

The main area which we believe the government should explore in further depth is that of Data Governance (also known as Accountability). Accountability (or assigning individual responsibility for data and data sets) is best achieved via Data Governance principles and practices and should be added to the pillars.

Without clear data governance, the other pillars are impossible to achieve. Data Governance is important to help drive a ‘whole-government’ approach. If we are currently in the middle of a fourth industrial revolution, this would seem to justify appointing a Chief Data Officer for government (the Geospatial Commission does this, but only for location data). Responsibility should be made clear for execution and outcomes.

Other areas that warrant further exploration and clarification are as follows:

* How ‘data availability’ would be enforced within the private sector without a legal framework. How do we apply definitions to datasets that determine whether they are in the public interest or considered IP?
* The difference between ‘data foundations’ and ‘data availability’ should be clearer
* For Government published data sets the ‘data format’ needs to be looked at. Scraping data from a website is not a scalable solution. As the TFL case study clearly showed, making data available via API supports integration into 3rd party developed apps and research & analysis.
* How the government will recognise key private/third sector datasets as national assets e.g. key mapping datasets like OpenStreetMap, Google maps etc.
* Clarification of data value, not all data is equally valuable.
* Private Sector innovation with the Government being the mediator. For example, actively enabling new start-ups to make services with citizen data, or allowing people to log into private platforms with a citizen ID. The strategy seems to be about Government driving change, but it should mainly be an enabler.

## **Q2. We are interested in examples of how data was or should have been used to deliver public benefits during the coronavirus (COVID-19) pandemic, beyond its use directly in health and social care.**

**Please give any examples that you can, including what, if anything, central government could do to build or develop them further. For question two, we are only looking for examples outside health and social care data. Health and social care data will be covered in the upcoming Data Strategy for Health and Social Care.**

***[DAMA UK submission]***

How data was or should have been used to deliver public benefits:

1. This [project by Slingshot Simulations](https://www.slingshotsimulations.co.uk/slingshot-success/can-digital-twins-sustainably-save-money-yes-it-can/) demonstrates the power of using data to simulate real world scenarios - they looked at air pollution in Leeds city centre. Slingshot are now building on the models and findings to [simulate traffic and air pollution as the community returns to the city](https://www.slingshotsimulations.co.uk/covid/slingshot-simulations-win-government-funding-for-covid-19-project/) following the pandemic. There is an opportunity to champion this use of data to support life during the pandemic or after.
2. Supporting a carefully managed and regulated UK Citizen master data platform where a whole view of a citizen can be derived could help in future pandemics or national emergencies and facilitate planning and contact.

Central government could support use of data post pandemic in the following ways;

* Monitoring data that gives insight into the way citizens lived and worked during the pandemic will give valuable insight into what the future will look like and how current thinking and planning needs to change. This will have a huge impact for the planning of infrastructure as well as planning and building of homes, and whether high speed internet access is available where it’s needed.
* Breaking down government silos to improve visibility of data held, by which department and details on data quality.

## **Q3. If applicable, please provide any comments about the potential impact of the proposals outlined in this consultation may have on individuals with a protected characteristic under the Equality Act 2010?**

***[DAMA UK submission]***

Use of available data can be used to support the application of the Equalities Act 2010, by collecting evidence of whether or not discrimination is taking place. We recommend documenting and sharing good practice so that evidence for bias can be controlled for and separated out from other correlating factors. In general, a consistent approach, with supporting guidance, for anonymising data will support organisations with the technique and help avoid re-identification of individuals and protected characteristics.

## **Q4. We welcome any comments about the potential impact of the proposals outlined in this consultation on the UK across all areas, and any steps the government should take to ensure that they take account of regional inequalities and support the whole of the UK?**

***[DAMA UK submission]***

As an organisation which promotes greater digital inclusivity and data literacy DAMA UK is of the view that there is evidently a data access and literacy challenge in this draft data strategy. If this is not addressed as a central aim of the final strategy the gulf between the digitally connected and aware and the digitally excluded will widen. Given the key thrust of the strategy is focused on the economic benefits better data will bring, there is a danger of wider inequalities as the economy becomes more digitally focused as the excluded will be even more disadvantaged and left behind. Data culture and literacy skills must be addressed. It also cannot be assumed that younger generations will gain the skills required to handle data even though they may be digitally native.

Particular concerns were raised by our members in the devolved areas of Scotland and Wales. Both have an aging population who may not be able to embrace the technology being developed to support consumption and interaction with data, or for data harvesting. Scotland in particular is also very diverse in terms of its regional infrastructure e.g. compare the capability for the cities of Edinburgh and Glasgow to that of the Councils of Orkney and Shetland and the Highlands and Islands. Investment will be required to support upskilling and educating in the data space.

A specific issue is likely to be the consistency in which data is made available regionally. But at the same time, overspecification of the required format of data may mean that smaller organisations, and those lacking the data management skills, struggle to make data available and exploit it to their advantage. One view is that a large component of the action should be in building master data into Geographical Information Systems (GIS). Providing shared and open ‘Maps’ for asset, infrastructure or environmental data would be a great backdrop and reference.

In summary, the strategy must embrace the fact that new businesses and jobs can be generated by opening up more government data, particularly how it might enable new businesses in remote locations and poorer areas. If data can be made more accessible to drive more digitalisation and also more innovation (e.g. new services, etc.) it is possible that current regional imbalances can be reduced.

## **Q5. Which sectors have the most to gain from better data availability?**

Please select all relevant options listed below, which are drawn from the Standardised Industry Classification (SIC) codes.

* Accommodation and Food Service Activities
* Administrative and Support Service Activities
* Agriculture, Forestry and Fishing
* Arts, Entertainment and Recreation
* Central/Local Government inc. Defence
* Charity or Non-Profit
* Construction
* Education
* Electricity, Gas, Steam and Air Conditioning Supply
* Financial and Insurance Activities
* Human Health and Social Work Activities
* Information and Communication
* Manufacturing
* Mining and Quarrying
* Transportation and Storage
* Water Supply
* Sewerage, Waste Management and Remediation Activities
* Wholesale and Retail Trade
* Repair Of Motor Vehicles and Motorcycles
* Professional, Scientific and Technical Activities
* Real Estate Activities
* Other

***[DAMA UK submission]***

DAMA UK represents data management professionals across many sectors. As such, we see that every sector is becoming more data driven and would benefit from better management and exploitation of data. Our members work across many of the listed sectors and the problems and barriers they face with data - data quality, multiple siloed data stores, overreliance on spreadsheets, shadow IT, lack of data skills, etc. are generic. These problems unnecessarily reduce efficiency and productivity, raise operational costs and negatively impact the customer / citizen experience. DAMA UK recommends an approach that is based on generic data improvement principles and practices, supplemented with sector specific policies and standards where appropriate. For example, look at how detailed principles and associated checklists can be applied (as the ICO did successfully for GDPR/DPA18) to allow sectors to apply what is relevant to them and the context they work in. These principles should be led by the National Chief Data Officer.

Based on our understanding of national priorities and feedback from our members, we would recommend the following as top priorities that would benefit from government leadership.

1. Central/ Local Government inc. Defence
2. Human Health and Social Work Activities
3. Electricity, Gas, Heating and Air Conditioning Supply
4. Transport

We invited all of our members to contribute, and we received the following sector specific contributions to this question.

Transportation and storage

An open innovation programme, Data Pitch, has allowed Greiner Packaging International GmbH (GPI) to share data with logistics intelligence company, OBUU to help address key challenges.

* Greiner Packaging International (GPI) shared data with logistics intelligence company OBUU via the Data Pitch programme, to help monitor the resilience and efficiency of its supply chain.
* By applying its technology to a range of indicators supplied by GPI, OBUU was able to identify a potential reduction of fixed asset investment of around 35%, resulting in a significant cost saving.

This case study is part of a project by the Open Data Institute exploring the value of sharing data in the private sector. When sharing data, businesses face a range of challenges. A significant barrier is a lack of understanding of how increasing access to data can create business value, for example by enabling new business models, increasing efficiency or reducing costs.

https://theodi.org/article/case-study-the-value-of-sharing-data-to-drive-open-innovation/

Real Estate Activities

The purpose of this project was to investigate the collection of geospatial data and to discover to

what degree the availability of data would facilitate decision making when developing brownfield sites for housing, specifically in the context of supporting the government’s aim “to build a million new homes to provide affordable housing to the people who need it, where they need it” . It demonstrates how improved availability of this type of data could help the industry, and support meeting national housing targets. <https://www.atkinsglobal.com/~/media/Files/A/Atkins-Corporate/uk-and-europe/documents/improving_safety_in_brownfield_development.pdf>

Central government and formulation of national policy

It may also be worth looking at this from an outcome point; what national objectives have the most to gain from data availability; for instance, climate change. Use this to then work with the sectors who have the data that could help meet this objective. This enables decomposition of the objective into smaller, more achievable goals chunks, accelerating benefits and encouraging collaboration. Another example would be to look at the question of, how could data help drive the ‘building back better’ and ‘levelling up’ policies.

Public Services

The delivery of public services would benefit from improved sharing of data, especially for vulnerable people who need support including the elderly, people with learning difficulty and children. Data sharing is inherently complex amongst these service providers as they have very different remits and so collect data for very different purposes. The data, especially for vulnerable people, is by definition very sensitive and so the risks from sharing are very real. This is an area where a national approach could bring scalable solutions that define what can be shared between service providers under what conditions and covered by appropriate data sharing agreements.

## **Q6. What role do you think central government should have in enabling better availability of data across the wider economy?**

***[DAMA UK submission]***

DAMA UK sees there are several roles that central government should take on:

First, it needs to get its own house in order and start to act as an exemplar of excellent data management and exploitation to the widely economy, rather than a laggard, which is frequently perceived as being the case today. There are islands of best practice within central government, but these are very disparate, and often the exception and not the rule. A DAMA UK member recently attended a Driver & Vehicles Standards Agency (DVSA) case study presented at a virtual data summit in November 2020. This agency of the Department for Transport has an immense data management technology platform encompassing Master Data Management (MDM), plus Extract, Transform, Load (ETL) and Cloud integration capabilities but the parent DfT does not itself have this toolset.

Second, open up more of its data sets and tag with metadata so that these can be made freely available to the wider economy, and used to add value and enrich the data held by non-governmental companies, organisations and educational establishments. The Environment Agency deserves credit for trailblazing this within the government. More departments need to follow this lead. Many departments across government hold data that could be shared, but currently is not. There is a part to play here for procurement policies which require those providing services to the government to share any data generated as widely as possible and embedding this within the contract.

Moreover, even when data is provided openly too much of it is poorly documented. It is often difficult to see the wood for the trees. Hunting through open data sets to find something that may be useful is a time consuming and often a fruitless task. Government departments typically publish large volumes of data as part of a commitment to open government, which is commendable, but with little thought as to how it might be used and how people who are looking for data might find it. Enriching open data published by the government with metadata and organising it according to taxonomies so that data was discoverable and explorable would be a major contribution for the government to make in the field of open data. Working with the Open Data Institute (ODI) would be a positive step in this regard. Some government departments are already well advanced in this area, and their expertise should be tapped into, e.g. the Office for National Statistics (ONS).

Central government has a critical role to play in enabling better availability of data across the wider economy. Central government should facilitate the aggregation and availability of data at national geographic scale. Data often resides at local and regional levels. The Greater London Authority Datastore is a good example of a regional public sector organisation aggregating and sharing data. Increasingly economic, environmental and societal challenges and opportunities need to be approached from a national perspective and therefore require access to national datasets. National data will help inform policy making, monitoring the effectiveness of policy and policy implementation.

Central government should also use its legislative power to ensure regulated businesses are encouraged to do the same. OFGEM has been leading the way through its RIIO-GD2 framework and ‘digitalisation’ license condition. This will ensure network companies work on a ‘presumed open’ approach, the adoption of best practice data management and cross sector collaboration, plus the work to plug the skills and capability gap. It is recommended that this approach is replicated across other industry sectors.

Third, create a UK government sponsored center of excellence in data management and exploitation. Staff this with experts in the various data disciplines and make their skills and experience available to organisations who wish to improve their data management and exploitation capabilities. These experts need not all be employed directly by the UK government, but can be third party people and organisations who are ‘certificated’ as experts. Commission them to create and support best practice guides, training, consulting etc. which can be made available to small and medium organisations who want to optimise their use of data.

Furthermore, it has been stated there will also be a Health Service Data Strategy. We need to ensure the National, Energy and Health Strategies are all aligned, and it sometimes feels they may not be. A national data center driving this consistently across the UK would ensure the highest value approaches are applied and lessons learnt are shared.

Overall, the central government should be a collaborator, regulator and legislator. It should recognise that private and third sectors should be effective data stewards, in addition to government. Many government projects focus on availability of public sector data only; it should be setting frameworks and support for other sectors to encourage greater data sharing.

## **Q6a. How should this role vary across sectors and applications?**

***[DAMA UK submission]***

As an organisation embracing all economic sectors, DAMA UK is very aware that data is not constrained to specific sectors and applications. Data is multi-disciplinary, and the problems and challenges of good data management and exploitation are universal. Moreover the best practice solutions that DAMA UK promotes are usually applicable across all sectors.

Central government should continue to champion the development and publication of registers and data catalogues. There are some good examples of emerging national registers, for example National Asset Register and the National Underground Asset Register. There is the need to apply consistent approaches to the development and publication of registers and data catalogues.

Focusing in on generic data foundations would benefit all sectors and applications. The true value of data can only be fully realised when it is fit for purpose, recorded in standardised formats on modern, future-proof systems and held in a condition that means it is findable, accessible, interoperable and reusable. By improving the quality of the data we are using, we can use it more effectively, and drive better insights and outcomes from its use.

## **Q7. To what extent do you agree with the following statement: The government has a role in supporting data foundations in the wider economy.**

Please explain your answer. If applicable, please indicate what you think the government’s enhanced role should be.

* Strongly disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Strongly agree

***[DAMA UK submission]***

Strongly agree. The government has a positive role to play in 3 distinct, but complementary areas:

1. ***Supporting skills through training and education***, just as other professions are supported.
2. ***Leading by example*** and ensuring that the foundations for managing government data are solid. By taking this leading role government will understand both the challenges and the value of laying these foundations.
3. ***Defining and/or promoting standards*** that define the details behind the headlines of these foundations.

**Supporting skills through training and education:**

* Skill sets in technology (hardware and software) have progressed rapidly in the past decade, but core data management skills have not.
* Include data skills and knowledge in education. Making data management part of the curriculum has the power to ensure the next generation are data literate as well as digitally literate.
* The advanced data manipulation skills and big data / data science analytics can be taught in tertiary education settings, but the foundations such as data quality, data privacy, data definitions etc that fall within the Data Governance discipline should be taught within Information Technology and related subjects during secondary education.
* Data skills are not sufficiently taught throughout all educational levels, from primary schools to Universities and in vocational education and training. Where these skills are taught (for example in University Computer Science departments) the emphasis is overwhelmingly on the technical components of data management (e.g. database design, coding, platform management, data science and so on.) Although these are important skills and are much in demand in a data driven economy, they often bypass the general working population. Data management is first and foremost a business skill set (e.g. how to ensure data is managed for optimal benefit, how to ensure that high quality data is generated when created, how to build data management requirements into business process design etc. etc.) These business data management skills should be taught alongside traditional business skills such as financial management, people management and so on. In a data driven, digital economy, data become the primary asset and should be nurtured and managed as such.
* Data management skills need to form part of the national curriculum. Data Management degrees should be encouraged, in the same way we have Data Science degrees.

**Leading by example:**

* Demonstrating a commitment to an ‘open data’ environment. Not just making public data available but listening to the consumers of that data and publishing it in a format that can integrated into analytics (i.e. not as pdf reports or web page content, but as downloadable data sets / API’s). And collaborating with Universities and industry on research.
* Ensuring that data are fit for purpose in the public sector (including what was previously the public sector, where regulators operate) and can be shared through Smart Data initiatives. These initiatives create a bubble around the data which can deliver on the presumption of openness, whilst providing a framework to maintain the necessary data security.
* In the same way we have an Health Minister, a Data Minister working under the Secretary of State would be a massive statement of intent

**Defining and promoting standards:**

* The idea of Foundation or Framework and the balance between the different elements is fundamental. A UK Government version supported by models, methods and a way of assessing maturity would be very helpful.
* A combination of Regulation, Collaboration, Expectation & Incentivisation needs to be put in place to encourage Data Foundations as per BCBS 239 & GDPR did in FS. However, regulation won’t work alone, there needs to be a motivation model outside of government.
* Ensure that Chief Data Officers exist in each of the public sector organisations who are responsible for achieving the necessary data maturity that supports the fit for purpose proposition. This becomes ‘trusted data’. The second step is to push Smart Data initiatives that facilitates the linkage and re-use of fit for purpose data. The public sector is great at linking data in the face of a crisis, or in the event of failure in social welfare. It is not good at continuous update and improvement, which results in friction in everyday life in areas. Consider streetworks for example. Initiatives come and go. Mapping the Underground spent significant sums in data modelling and research into underground location techniques and then probably through lack of capacity building was forgotten. We need to ensure the current NUAR initiative has Smart Data credentials.

**Q8. What could central government do beyond existing schemes to tackle the particular barriers that small and medium-sized enterprises (SMEs) face in using data effectively?**

***[DAMA UK submission]***

DAMA UK advocates creating a UK government sponsored data management centre of excellence. The private companies and individuals who are currently able to offer these services are often prohibitively expensive for SMEs to engage. Creating a centre of excellence and extensive help and support in data management principles and practices to SMEs would enable them to access these skills and so better manage and exploit their data. One of the barriers to data analysis is technology and infrastructure. Many smaller organisations cannot afford to license data analysis tools and only have Microsoft Excel available. Whilst Excel is an immensely powerful tool, as demonstrated recently with the Track and Trace data, it does have limitations. The government could influence the software vendors to provide discounted licensing to SMEs.

## Central government could also really help by providing clear guidelines and examples for SMEs to use as a means of compensating for the fact that they do not have the resources of large corporates to maintain specific expertise. The Data Standards Authority would be the logical place to start with this, and could formulate government approved templates for things like privacy statements, data sharing agreements, information security policies and so on. The Information Commissioners Office (ICO) also has a role to play. It has been doing exemplary work in engaging with organisations of all sizes and helping them to comply with complex data processing legislation.

## **Q9. Beyond existing Smart Data plans, what, if any, further work do you think should be done to ensure that consumers’ data is put to work for them**?

***[DAMA UK submission]***

Progress to date on smart data has been very limited. There have been pockets of innovation in this space including smart banking services and the use of smart metering data in utilities. Individual companies have been exploiting the data that they collect on their customers to understand spending behaviours, credit worthiness, mobility or energy consumption, but beyond recommending optimal pricing regimes, little of this has fed back to directly benefit the consumer. The potential has yet to be realised, so rather than looking further and thinking beyond the existing plans, it would make sense to look critically at the current plans and to evaluate where they have and haven’t been successful in delivering value to the consumer. Where plans have not delivered, understand why and take corrective action if needed.

The key will be to incentivise the development of new solution offerings. Educating the population as consumers as to what they can expect or demand in terms of innovation from services providers allows consumers to vote with their feet and choose suppliers who give them valuable insight as standard. Other approaches could also be taken including incentives such as tax relief on revenue generated as a result of a smart data initiative, or penalties for withholding data that could be used to support smart data services.

**Mission two: Maintaining a pro-growth and trusted data regime**

Building on our status as a world leader in technological innovation and our robust data protection standards, we will maintain a data regime that supports the future objectives of the UK outside of the EU and promotes growth and innovation while maintaining public trust. This regime will not be overly burdensome for the average company, nor will it be unnecessarily complex or vague; it will help innovators and entrepreneurs use data legitimately to build and expand their businesses, without undue regulatory uncertainty or risk at both the domestic and international levels.

## **Q10. How can the UK’s data protection framework remain fit for purpose in an increasingly digital and data driven age?**

***[DAMA UK submission]***

* **Global cooperation.**
	+ GDPR has become the global standard for data protection. Many companies outside of the EU/EEA have voluntarily chosen to align with the GDPR, both as an indication of quality to their customers but also as a way of ensuring that they are not excluded from offering services within one of the world’s largest and most technologically sophisticated markets. Maintaining global alignment and sharing information about approaches to data protection will ensure UK citizens are protected while data is shared and used in digital services and to support the economy. Keeping up with the pace of change will need to be achieved through collaboration and incorporating lessons learned from other countries.
	+ Working with European friends and neighbours to evolve compatible data protection legislation will ensure we remain relevant across Europe. By maintaining UK alignment with GDPR, British companies will maintain their competitive position by default, rather than having to prove that they are compliant.
* **Support the Information Commissioner's Office.**

Protecting funding to the ICO, investing in skills and reviewing ICO enforcement powers and resourcing to ensure it has “teeth” and is able to take appropriate action to enforce data protection legislation.

**In section 7.1.2 we lay out the functions of the Centre for Data Ethics and Innovation (CDEI), set up in 2018 to advise the Government on the use of data-driven technologies and AI**.

## **Q11. To what extent do you agree with the functions set out for the Centre for Data Ethics and Innovation (CDEI) - AI monitoring, partnership working and piloting and testing potential interventions in the tech landscape?**

Please explain your answer.

* Strongly disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Strongly agree

***[DAMA UK submission]***

DAMA UK represents data management professionals across many sectors. Therefore, due to the wide spectrum of responses we have included all submissions, to ensure a balanced response is provided from our members.

***Somewhat disagree,*** putting this great emphasis on AI is putting the cart before the horse. Successful AI, like data science and data analytics, can only deliver maximum value when the data foundations are right. If you build houses without solid foundations they tend to collapse or become unstable. Getting the basics right is a much higher priority as it has been consistently shown in numerous studies that poor data quality has a significant negative impact on companies and organisations, both in the public and private sectors. Some studies show that on average as much as 25% of the turnover of a company can be eaten up because of poor data quality and the deleterious effects it has on costs, revenues and (where appropriate) profits. Tackling this would have a much bigger and more beneficial impact on the economy. AI has a part to play, but its benefits will be significantly lower than anticipated.

AI is only as good as the underlying data and failing to get the foundations right could lead to catastrophic mistakes being made with the use of AI. I would go as far as to say that embracing AI without suitable data foundations in place (included Data Governance) is not only foolhardy but is not ethical.

## The document does recognise the difference between data management and analysing data, data science or otherwise processing data (AI) . It can be made more clear and needs to be ingrained - poor quality data costs money and can be dangerous in so many ways and this is exacerbated the more it is accessed and used for insight. Foundation first!

**Somewhat agree**, although I think there could be more focus on education and trying to address the cultural impact of AI and Automation. The biggest obstacle to AI will be the people it may end up replacing, so managing the perceptions and response of the workforce is key too.

The NDS recognises some of the important pitfalls associated with the use of AI and other innovative uses of data. A strong CDEI has an important role to play in ensuring that innovation occurs within a robust ethical framework and that a premium is placed on trust through transparency. Part of this should be an assurance that the data being used has been obtained legitimately and that it is fit for purpose. The role of the CDEI should include the development of guidelines so that it is clear for innovators what they can and cannot do, along with guidelines for best practice in terms of ensuring that data is fit for purpose and how to avoid amplifying bias.

**Q11a. How would a change to statutory status support the CDEI to deliver its remit?**

***[DAMA UK submission]***

CDEI needs to have greater visibility and engagement across the data landscape, ensuring that there is that engagement which can be supported.

**Mission three: Transforming government’s use of data to drive efficiency and improve public services**

There is massive untapped potential in the way the government uses data. We will implement major and radical changes in the way that the government uses data to drive innovation and productivity across the UK. In doing so, we will improve the delivery of public services, as well as our ability to measure the impact of policies and programmes, and to ensure resources are used effectively.

To succeed, we need a whole-government approach led by a Government Chief Data Officer from the centre in strong partnership with organisations. We need to transform the way data is collected, managed, used and shared across government, including with the wider public sector, and create joined-up and interoperable data infrastructure. We need the right skills and leadership to understand and unlock the potential of data – and we need to do so in a way that both incentivises organisations to do the right thing, as well as build in the right controls to drive standardisation, consistency and appropriate data use.

The government is going to set an ambitious package of work in this space and wants to understand where we can have the biggest impact.

## **Q12. We have identified five broad areas of work as part of our mission for enabling better use of data across government. We want to hear your views on any actions you think will have the biggest impact for transforming government’s use of data.**

**(Quality, availability and access, Standards and assurance, Capability, leadership and culture, Accountability and productivity, Ethics and public trust).**

***[DAMA UK submission]***

In the view of DAMA UK all are important but the most impact will be gained by focusing on Quality, Availability and Access. It follows almost organically that the more the data is used and consumed the other supporting areas develop. We would also stress that Quality should include data governance; data quality activities without a solid data governance foundation tend to be tactical and short term at best, and frequently unsuccessful at worst.

Moreover, unless data quality can be measured against a set of requirements it is an intangible concept. These measurements need to be put in place for data, and KPI targets set to drive and measure improvements.

Geoplace (a joint venture between Ordnance Survey GB and the Local Government Association) is a good example of enabling better use of data across government. Geoplace brings together national addressing and street data in a consistent and standardised way. This data is then made available to the government via the Geospatial Commission Public Sector Geospatial Agreement. The challenge is not necessarily about transforming government’s use of data but more about transforming the approaches that are used to bringing data together at different geographical scales and then publishing this data.

One area not explicitly covered is data licensing. There is often friction when sharing data across government due to licensing issues and constraints. If data is not managed via open licenses, use can be restricted. Looking into ways to reduce this constraint could help massively day to day in terms of accessibility and reuse of data across government.

## **Q13. The Data Standards Authority is working with a range of public sector and external organisations to create a pipeline of data standards and standard practices that should be adopted. We welcome your views on standards that should be prioritised, building on the standards which have already been recommended.**

***[DAMA UK submission]***

The DAMA UK membership recommends prioritising the following standards for data;

Data collection and structure

* Citizen data capture and collection. Having multiple and often conflicting citizen names, addresses etc. is a major barrier to joined up government.
* Geospatial data, such as base maps and addressing.
	+ There is a need to build on existing standards, for example BS7666 for addressing and streets data. Often local authorities are the custodians of data but standards need to be developed enabling local authorities to share and join data with other local authorities, in order to create and maintain national datasets, or enable users to join up data from different geographical areas.
	+ The INSPIRE Directive (2007/2/EC) is the basis for responding to the UN Climate Change Conference. These standards allow questions to be answered about human activities and their impact on the climate. This framework could be used as the starting point for the Smart Data initiatives in several of the sectors mentioned in Question 5 to create data repositories. This priority should be owned by the Cabinet Office and could be delivered through data.gov.uk.
* Data formats. For example when things should be .csv, xml etc.

Standard processes - Government has a role in sharing best practice.

* Data anonymisation standard processes.
* Processes to support development of API’s.

**Mission four: Ensuring the security and resilience of the infrastructure on which data relies**

In the UK, the government already imposes safeguards and enforcement regimes to ensure that our data is handled responsibly. But we will also take a greater responsibility for ensuring that data is sufficiently protected when in transit, or when stored in external data centres.

The government will determine the scale and nature of risks and the appropriate response, accounting for emerging trends in the market landscape. We will also determine whether current arrangements for managing data security risks are sufficient to protect the UK from threats that counter our missions for data to be a force for good. And we will consider the sustainability of data use, exploring inefficiencies in stored and processed data, and other carbon-inefficient processes.

The infrastructure on which data relies is the virtual or physical data infrastructure, systems and services that store, process and transfer data. This includes data centres (that provide the physical space to store data), peering and transit infrastructure (that enable the exchange of data), and cloud computing that provides virtualised computing resources (for example servers, software, databases, data analytics) that are accessed remotely.

## **Q14. What responsibilities and requirements should be placed on virtual or physical data infrastructure service providers to provide data security, continuity and resilience of service supply?**

***[DAMA UK submission]***

Total accountability for the physical security of the data in terms of the disaster recovery environment should lie with the infrastructure provider, whether in the cloud or on premise. But when evaluating the risks of releasing viruses, inappropriate access, data hacking etc. this must land with the Data Owner. There needs to be a clear delineation between the Infrastructure provider and the Data Owner. Data Owners cannot outsource their responsibilities.

Data jurisdictions are more complex today and it is important to understand which regulatory regimes and national & international laws the data will be subject to, based on where it is stored and processed.

## **Q14a. How do clients assess the robustness of security protocols when choosing data infrastructure services? How do they ensure that providers are keeping up with those protocols during their contract?**

***[DAMA UK submission]***

In practice, it is suspected that this is very inconsistent and often a hit and miss process. When selecting a service provider there is frequently a degree of due diligence (usually as part of the procurement process) during which ISO 27001 certification etc. are checked. There may also be some physical testing, such as penetration testing.

But the contract wording looks to embed the requirements of the service provider and its frequently ‘assumed’ these are being adhered to, rather than regularly evidencing that and auditing that is the case. And then, for the major cloud providers like Amazon AWS and Microsoft Azure, many also assume robustness because of the size and scale of services offered and that all requirements are covered.

## **Q15. Demand for external data storage and processing services is growing. In order to maintain high standards of security and resilience for the infrastructure on which data use relies, what should be the respective roles of government, data service providers, their supply chain and their clients?**

***[DAMA UK submission]***

A shared responsibility model is appropriate, and the leading cloud providers (AWS, Micorosoft Azure and Google Cloud Platform) all have models that define controls that are defined and managed wholly by the provider, wholly by the client and controls where the responsibility is shared. Government should use these models as the starting point and develop policies and standards for customer specific and shared responsibilities. Seeking out best practice where it already exists within government should be the starting point for the development of standards and best practice recommendations for security and resilience.

Since this is a field that continues to evolve, government should ensure that policies and standards produced for government use should be designed to evolve and that those responsible for maintaining them should expect to follow industry trends and best practice as it develops.

## **Q16. What are the most important risk factors in managing the security and resilience of the infrastructure on which data use relies?**

**For example, the physical security of sites, the geographic location where data is stored, the diversity and actors in the market and supply chains, or other factors.**

***[DAMA UK submission]***

All the above are extremely important, but the biggest risk to business continuity is not the physical environment, but unauthorised access to the data.

Data security and resilience are mature disciplines that are mastered by a number of sophisticated service providers (e.g. Google, Amazon & Microsoft). Cloud computing is very secure and supported by a number of mature technologies including strong encryption. Weaknesses are typically found at the end points and depend on individual companies or users. There is a strong service offering in information security services with offerings that include penetration testing and ethical hacking.

At the same time, threats are constant and include sophisticated state actors, bots and organised criminals. Government has a role to play in maintaining awareness of the measures that companies need to take to protect themselves and their customers from but not limited to unauthorised access to the data - the risks of viruses /data breaches / hacking of the data etc, and once again, government can take the lead by ensuring that all government departments adopt appropriate security measures, and do not expose themselves to unnecessary risks.

## **Q17. Do you agree that the government should play a greater role in ensuring that data does not negatively contribute to carbon usage?**

**Please explain your answer. If applicable, please indicate how the government can effectively ensure that data does not negatively contribute to carbon usage.**

* Strongly disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Strongly agree

***[DAMA UK submission]***

Neither agree nor disagree.

Despite the alarming figures for the energy consumption and carbon emissions for mega data centres, progress in computing and data processing has always resulted in overall efficiencies in terms of doing more with less. The rise of the mega data centre driven by cloud computing, for example, is accompanied by a reduction in on premise servers and mini data centres. Overall more computing power is delivered for less total energy. Beyond that the intelligent use of data has a huge contribution to play in terms of optimising energy usage, in transport and in making global supply chains more efficient and less wasteful. Optimising energy demand using real time data, for example, will allow the UK to reduce the total installed base for electricity by smoothing out the peaks and troughs of consumption and matching it more closely with sustainable energy production.

**Mission five: Championing the international flow of data**

In our hyper-connected world, the ability to exchange data securely across borders is essential.

As the UK leaves the EU, we have the opportunity to develop a new UK capability that delivers new and innovative mechanisms for international data transfers.

Using our reputation as a world leader in digital, a champion of free trade and the rules-based international system, and an engaged, rule-abiding member of the global community, we will build trust in data’s use, creating the regimes, approaches and tools to ensure personal data is appropriately safeguarded as it moves across borders. We will also facilitate cross-border data flows by removing unnecessary barriers to international data transfers that promote growth and innovation. And we will seek to promote data standards, data interoperability, and UK values internationally.

## **Q18. How can the UK improve on current international transfer mechanisms, while ensuring that the personal data of UK citizens is appropriately safeguarded?**

***[DAMA UK submission]***

Data jurisdictions are more complex today and it's important to understand which regulatory regimes and national/ international laws the data will be subject to based on where it is. It would be good if service providers were able to support this by helping customers (i.e. Government) understand better the implications of using certain services/ locations, etc. on their data. Furthermore, there needs to be international agreement in the vein of cross- border consumer rights protections that ensure that data is treated to common requirements. You could even imagine the government creating “Data Corridors” like we have “Covid Travel Corridors”- this would give organisations confidence that as long as they know the physical route of data transfers across international networks (e.g. Cloud Platforms), their domestic regime requirements will be at least met during travel of the data and its residency at target.

**We will seek EU ‘data adequacy’ to maintain the free flow of personal data from the EEA and we will pursue UK ‘data adequacy’ with global partners to promote the free flow of data to and from the UK and ensure it will be properly protected.**

## **Q19. What are your views on future UK data adequacy arrangements (e.g. which countries are priorities) and how can the UK work with stakeholders to ensure the best possible outcome for the UK?**

***[DAMA UK submission]***

Love it or hate it, the GDPR is the global golden standard for data protection. Many companies outside of the EU/EEA have voluntarily chosen to align with the GDPR, both as an indication of quality to their customers but also as a way of ensuring that they are not excluded from offering services within one of the world’s largest and most technologically sophisticated markets. When large multinational companies are procuring services, including data processing services, they typically specify the standards to which any supplier must comply. Compliance with these standards is typically non-negotiable and non-compliance disqualifies suppliers from bidding. Services that require data processing ISO27001 for information security and GDPR for data protection are typically mandatory requirements. As a result UK companies who wish to compete internationally need to comply with both of these standards. By maintaining UK alignment with GDPR, British companies will maintain their competitive position by default, rather than having to prove that they are compliant.

Whilst countries which are considered to be a priority where creating an environment where data can be safely stored in and shared, would be USA, China and India.

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## **Q20. DAMA UK members who have contributed to this list include (please add your name, in alphabetical order, if you would like to be credited);**

1. Akhtar Ali, Vice Chair, DAMA UK.
2. Nicola Askham, The Data Governance Coach and DAMA UK committee member
3. Bob Chell, Chief Operating Officer, 1Spatial Group
4. Mary Drabble, DAMA UK Committee Member, representing Scotland.
5. Ed Evans, NDB Upstream, BCS DMSG committee and DAMA member.
6. Mohammad Haris Syed ACA, Managing Consultant, The DMW Group.
7. Mark Humphries, Chairman, DAMA UK
8. Liam Kelly, Head of Data & Information Centre of Excellence, Energy Sector
9. William Richard Evans, Multi-Dimensional Thinkers
10. Nigel Turner, Principal Information Management Consultant, Global Data Strategy Ltd. and DAMA UK Committee Member. Also representing Wales.
11. Deborah Yates, DAMA UK committee member