

Science and Technology Committee

Oral evidence: [Digital Government](#), HC 1455

Tuesday 4 December 2018

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[Watch the meeting](#)

Members present: Norman Lamb (Chair); Stephen Metcalfe; Carol Monaghan; Graham Stringer; Martin Whitfield.

Questions 81 - 196

Witnesses

[I](#): Sam Smith, Co-ordinator, medConfidential; Professor Vishanth Weerakkody, Professor of Information Systems Management and Governance, University of Bradford; Robert McLaren, Head of Industry, Technology and Innovation, Policy Connect; and Professor Helen Kennedy, Professor of Digital Society, University of Sheffield.

[II](#): Dr Fiona Lugg-Widger, Research Associate for Routine Data, Centre for Trials Research; Tom Smith, Managing Director of the Data Science Campus, Office for National Statistics; Joel Bellman, Partner, Deloitte; and Cllr Peter Fleming, Chairman of the LGA Improvement and Innovation Board, Local Government Association.

Written evidence from witnesses:

- [medConfidential](#)
- [University of Bradford](#)
- [Policy Connect](#)
- [Centre for Trials Research, Cardiff University](#)
- [Office for National Statistics](#)
- [Deloitte](#)
- [Local Government Association](#)

Examination of witnesses

Witnesses: Sam Smith, Professor Vishanth Weerakkody, Robert McLaren and Professor Helen Kennedy.

Q81 Chair: Welcome, all of you. Thank you very much for coming in. I will ask you to introduce yourselves in a moment. There are four of you on the panel, as you will have noticed. If all of you answer every question, we will be here for hours, so please try to keep your answers succinct—don't feel that you have to respond to everything, if somebody else has given an answer you basically agree with. May we start with brief introductions?

Professor Weerakkody: I am a professor of information systems management and governance at the school of management at the University of Bradford. Before getting into academia, I spent about 15 years in industry, including in my last post at IBM, as a methods and process analyst. I have a mixed background of software engineering, business systems design and organisational transformation.

Robert McLaren: I lead on the assistive technology work of the industry, technology and innovation team for the cross-party think-tank Policy Connect. I come from an assistive technology background, having used assistive technology myself and worked in that sector.

Sam Smith: I am the co-ordinator of medConfidential. As our name suggests, we focus mostly on the NHS, but the data that Government Departments most want to access is often health data. You know from your own constituent casework that what public bodies do with data in theory and in practice may not necessarily be consistent. Patients and citizens should know how the data is used, in the same way as taxpayers should know how their money is spent.

Professor Kennedy: I am professor of digital society at the University of Sheffield. For the purposes of this inquiry, what is relevant is that I am currently researching citizens' trust in data practices, experiences of big data and efforts to make data transparent and accessible through visualisation. I have researched accessibility in the past as well.

Q82 Chair: How can digitising Government affect or change the relationship between the state and the citizen?

Professor Weerakkody: It is very important to understand what we mean by digital Government. So far, what has been said and done on digital Government has ignored what public administration is meant to do. Public administration in this House defines the legislation that enacts policy into practice. We are trying to overlay commercial models of technology on to legislation without really understanding what this House actually does with that.

Q83 Chair: But the Government also deliver services, don't they? Government agencies do that—for passports, for example. I have recently applied for



the renewal of my passport.

Professor Weerakkody: Correct. I take the view that we have to be careful about the word “service” here. As a citizen, I need a passport to travel. Therefore, it is my legal obligation to obtain a passport. It makes it convenient for me to access the service and to do the transaction that is required of me, as a citizen, to obtain my passport. I am very conscious of the fact that we are getting carried away with terminology like “services,” “customers” and “end users.”

Q84 **Chair:** In your vision of what digitising Government could do, how does that change the relationship between state and citizen?

Professor Weerakkody: I go back to the fundamental basics of what Government do. You define policies, the House defines the legislation and then we select the instruments. Very clear examples of good delivery of digital Government are congestion charging or contactless travel. The instrument is congestion charging, not the IT system. The IT system is part of the whole instrument for implementing that policy. Contactless travel is another useful example. Understanding the instruments that we use to deliver the policies and the surrounding legislation—

Q85 **Chair:** I am still after understanding whether there is any change to the relationship between the citizen and the state.

Professor Weerakkody: I think that it will improve the relationship between the citizen and the state if, instead of trying to overlay commercial models of websites for every transaction that is being done, we understand—

Q86 **Chair:** Do you think that that is not a sensible thing to do? Do you think that that is part of it?

Professor Weerakkody: It is a very sensible thing to do, but we must look at it as a cohesive overall picture. We must start with the policy design process and then select the instruments to deliver those policies—technology has a huge role to play there—instead of getting carried away with services and commercial models. Compare the percentage of citizens engaging with digital Government with the percentage of those engaging for social purposes and shopping—for example, with Amazon. For shopping and social media, I have a choice. When I deal with Government, in some cases, I do not have a choice. It is my statutory obligation.

Q87 **Chair:** But you still want the exercise of that obligation to be as smooth and straightforward as possible.

Professor Weerakkody: Absolutely.

Q88 **Chair:** Sam, will you focus on the question that I asked at the start?

Sam Smith: I will give an example. The bit of the Department of Health called NHS Digital built a very nice online process to express a patient’s wish to opt out of data being used for purposes beyond direct care—the



national data opt-out, which you may have seen. It will be the model for the organ donation opt-out, which has a number of changes.

The digital bit of the NHS, under the most digital Secretary of State that we have ever had, decided that, to have a dependent child living at home opt out, the parent had to go to the postbox and post four bits of ID to an office. The reason for that was that the digital development process was so fast, and the intra-Government agreement processes were so slow, that it was easier for the people doing the work in Leeds to say, "We can't fix that. We will have to push it out of the process."

A lot of what we see with some digital services is what can be done better, such as applying for a passport. Sometimes, when you get outside what can generally be done, you end up being pushed into an offline process, which is much more complicated. The people who have more complex needs get pushed out of these processes. Universal credit has a lot of complex needs.

GDS standards require Ministers to use the system before it goes live. They required that for the NHS service. Did the Minister forget that he had children when he went through the process? In their manifesto, the Government said that digital would prompt a revolution between the citizen and the state. I am not sure that parents going to the postbox was quite what they meant.

The second half of the recent UN special rapporteur report on poverty picked up purely on digital processes. The only bit of the guidance given to the special rapporteur about digital Government and algorithms was the line that talks about recourse to rebellions if you cannot have a proper conversation through the rule of law. I am not quite sure that that is what the Government meant.

Q89 **Chair:** Do you want to add anything, Helen?

Professor Kennedy: How it affects the relationship between the citizen and the state depends on what you mean by digitisation. It covers a wide range of things. These days, it almost inevitably involves gathering data. That is where most concerns and most danger of declining trust exist. I do not know whether you want to come on to that later.

Q90 **Chair:** That is good, because it brings me on to the second question. What are the main potential benefits of, and the main concerns about, the process of digitising Government and the use of data? Can you expand on that?

Professor Kennedy: Most research would say that how a citizen already feels about an organisation affects how they then feel about the organisation's data practices. On the whole, there is a relationship there. A lot of what I am going to say is possibly beyond the remit of this inquiry. If you have a broad context in which around 45% of UK citizens trust the Government, that needs dealing with in order that citizens may feel trusting towards a Government's data practices.



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Q91 **Chair:** You are saying that we are starting from quite a low base.

Professor Kennedy: Yes. A lot of the recommendations that would emerge out of research in this field relate not to changes to a particular body's actual data practices but to changes to broader cultures. For example, if citizens felt that data mining, data sharing and data analytics were being regulated proactively and transparently, there might be a shift in the culture of trust that would mean that they trusted the Government's data practices more.

Q92 **Chair:** Are we almost at a tipping point? Could we end up, as Vishanth said, with an improved relationship between the state and the citizen, if it gets trust in place and regulates on the basis of ensuring that trust is always there? On the other hand, if we get it wrong, could it damage the relationship even more?

Professor Kennedy: Yes. I think that both things are happening. There are some good examples. The very fact of digitised services is welcome to lots of people, and impossible to avoid in a digital age. That is already happening. At the same time, what is already happening is that people are becoming more aware that their data is being gathered, mined and shared, but it is not clear how. Not just in Government, but across all kinds of digital platforms, there has been a principle of what is called opacity by design. You build in opaqueness, so that it is not really clear what is happening. Terms and conditions have generally been oriented towards looking after issues of corporate or institutional liability. They have not been about making what happens clear and comprehensible to citizens.

Q93 **Chair:** You think that that mindset in Government needs to change.

Professor Kennedy: Yes. It is not just in Government, though. I should say that my research has not been focused on Government.

Q94 **Chair:** Sure. For the purposes of this inquiry, we are looking at what Government should be doing to digitise Government.

Professor Kennedy: Yes. There is a broader trend in that direction, anyway. There is a broader sense that citizens or users do not trust because they do not understand. If we want their buy-in, through their trust, we had better take some steps to ensure understanding, as one measure.

Professor Weerakkody: Helen makes a very good point about trust. We should keep it simple when we open up data. There is so much data out there at the moment. As a citizen, I want data about day-to-day life. If I am moving house, for example, I want information about schools, transport, the environment and healthcare. It is more local. The amount of data on gov.uk means very little to me, as a citizen. I have been following the data on gov.uk since it has been open. It has devolved. To me, it has got worse than it was before.



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Q95 **Chair:** There is a vast amount of potentially useful data that could benefit the citizen, but it is not being exploited effectively.

Professor Weerakkody: Exactly.

Q96 **Chair:** What are the main ways in which digital Government can increase the levels of trust—and, indeed, of political participation—in the UK? Helen, will you expand on what you think ought to be happening to build trust?

Professor Kennedy: Governments should be much more proactive in thinking about how to regulate data breaches, for example. By that, I do not necessarily mean their own data breaches. The Government should be seen to be leading the field in looking at how to deal with or punish data breaches. We now have the GDPR in place, but how are data breaches dealt with through legislation?

Q97 **Chair:** You feel that they are too passive, in effect.

Professor Kennedy: Yes. I think that all Governments are. The UK Government hoped to be world leading in the implementation of its digital strategy. There was much in that to be proud of. Here is another area where they could opt in to being world leading. But it involves a political choice. It involves holding giant tech companies to account. There needs to be a political will to do that.

Robert McLaren: A key way of building trust in digital services is to ensure that they are accessible and inclusive for everyone. Partly, that means designing digital services so that they meet accessibility standards. They must be designed on universal design principles that mean that you start with difficult cases and design out to make the services easier to use for everyone.

Of course, it also means ensuring that you are not giving people only one channel of engagement. You build trust by saying, "We are not going to foist just one option on you. There are alternatives." In fact, the new web accessibility regulations, which came in in September, build in the principle that every public sector website will have an accessibility statement that provides an option for a user to request alternative ways of accessing that content. Building accessibility is part of trust in digital services, but so is having flexibility and different options. The new regulations will be key to that.

Q98 **Chair:** I will take a very brief comment from Sam.

Sam Smith: All the comments about data breaches are incredibly important, but if the breaches are all people hear about when they hear about how data is used, trust will eventually keep going down. There has to be a process for telling people about how their data are used. On an ongoing basis, everybody in this room will be in about 5,000 medical studies you know nothing about. If you were told that, you would have some context for how data is used—not just when there is a problem, but



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generally. Most people will never look—it is about the fact that you know that it is there. When it comes to algorithms, we already require public bodies to satisfy the principles of judicial review and the Bingham principles on the rule of law when making a decision. Are we going to have lower standards because a computer is involved?

Q99 Graham Stringer: We have been told that Estonia is advanced in digital Government and that we could learn a lot from the Estonian Government. Do you agree?

Sam Smith: Estonia does many things. We saw over the weekend that Sir Alex Ferguson's medical records were accessed by curious staff after his stroke. Estonia requires that any access to personal data by the state, including the police, is logged and visible to the citizen. Similarly, there are models for things like digital courts, which the MOJ has decided to ignore in favour of underfunding its own approach.

This has been a slightly depressing panel so far, but there is one optimistic thing that the UK can do and Estonia probably cannot. The UK and London have large communities of lawyers, judges and technologists who understand the principles of the rule of law, tech companies that are building new tools and Government that actually wants to use this stuff and is very interested. That does not really exist anywhere else in the world. It is an opportunity, if the UK public sector says, "We will buy stuff that satisfies our explainability requirements. We will talk to one another to find out what they are."

Q100 Graham Stringer: I am not sure what you are saying. Are you saying that we do not have a lot to learn from Estonia and that they could learn from us?

Sam Smith: There are different areas. They do transparency incredibly well. Given where they came from in the early '90s and the fear of the state that their populace had, the solution to lack of trust was to say, "The state will be able to do a number of things, but you will be able to see anything that the state does with access to your data."

I am not sure that you can get that through the giant vampire squid of Marsham Street, but the NHS is working on it. The NHS knows that your summary care record contains critical medical information about you and that anybody can walk into a hospital and get treated, because A&E has to keep working. In that context, where you cannot engineer out risk and have to deal with it, the approach that the NHS is slowly taking is to say, "We will start to show people what actually happened, so that everybody has an evidence base." It is not doing some hard bits, and it is doing it quite slowly, but, fundamentally, the way in which you build trust—copying from the Estonian model—is to tell people, "This is how our data was used." Most people have no idea. They would look at it and say, "That is actually quite interesting."

Q101 Graham Stringer: Is there anything else we can learn from Estonia,



apart from transparency?

Professor Weerakkody: May I add something to that? When we look at Estonia, we tend to get carried away by its technical infrastructure and architecture. The case of Estonia is slightly different from that of the UK, because they had the privilege of starting with a clean sheet of paper—of looking at the whole policy design process, the governance structures, the associated legislation and the instruments. They looked at the broader picture.

Q102 **Chair:** They do not have the legacy systems we are burdened by.

Professor Weerakkody: Exactly. I think that there are lessons to be learned. It goes back to my initial argument about looking at the whole picture of policy, the legislation and the instruments. There may be instances where we can look at clean sheets of paper, when new policies are being introduced, but it is complex, because of the interconnection between the different Government Departments and stakeholders. I think that it is slightly different. On things like transparency and trust, we can learn lessons, but it is very difficult to compare the Estonian model with the UK situation.

Robert McLaren: May I add something about international comparisons more broadly?

Graham Stringer: That was my next question.

Chair: That is remarkable, Robert.

Q103 **Graham Stringer:** Where else is there, apart from Estonia?

Robert McLaren: The new web accessibility regulations that we have here, which I mentioned before and which came in in September, transpose an EU directive. We will therefore have a lot of opportunity to see how member states across the EU implement and enforce those regulations and monitor websites.

Countries such as Norway have been ahead of the curve on web accessibility. In Norway, a regulatory body assesses a new website, makes a determination of its usability by disabled and older people, and gives the body concerned a deadline to improve. Recently an airline narrowly escaped a fine by fixing its website just in time to meet the deadline. As we develop our own monitoring and enforcement mechanisms in relation to web accessibility for the public sector, we will have a lot of opportunity to look at how it is being done across Europe.

Q104 **Graham Stringer:** Do members of the panel want to cite any other examples of other countries?

Professor Weerakkody: I will begin, if I may. The issue of web accessibility has been there for 20 years or more. It is nothing new. I find it quite disappointing, as a researcher. I started researching digital Government back in 1997. I have been following it for the last 20 years.



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These issues were there at the start. One of my very first papers was on web accessibility of digital Government websites. It involved putting people of different capabilities into a room and doing an experiment. The standards have been there for many years.

Q105 **Chair:** We are looking for examples of other countries we can learn from. That was Graham's question. I am keen to get answers to it.

Sam Smith: I am told that British Columbia in Canada does digital courts very well, but I do not have that sort of stuff in my head.

Q106 **Chair:** I am surprised that there is no reference to Denmark. We are told that Denmark has developed its systems for digitising Government very well. Do you have any experience of that?

Professor Weerakkody: According to the e-Government benchmark survey of 2018, the top 10 countries include Malta, Austria, Sweden, Finland, Denmark, Lithuania, Portugal and Norway. Again, they have kept it very basic. Most of what they have done looks at daily life events for people, whether it is finding a job, losing a job or applying for a place at a university. It is about keeping things very simple. As I said earlier, web accessibility is nothing new. It has been there for many years. We do not need to learn from anybody—we already know it. It is about keeping it very simple and easy, in terms of transparency.

Professor Kennedy: The success of digital Government in countries around the world is dependent, in part, on broader infrastructures—people being able to access hardware, software and network connections, and, as Robert said, there always being an alternative way to engage with Government. Again, it goes beyond what the Government themselves are doing, to the provision of digital infrastructural support to all citizens.

Q107 **Carol Monaghan:** First, may I ask a little about consent? Should the Government be looking at some consent model for citizen data, as Estonia is doing?

Sam Smith: I am not sure that they use a consent model. They use a transparency model, but—certainly under GDPR—public bodies should not be using consent for decisions. If the choice is, "If you give consent, we will give you universal credit or benefits. If you don't give consent, we won't," that is not a freely given consent choice. I am not sure that consent is the right way of looking at it. For many data processes, there is the consent of Parliament to pass a law to make something lawful, so there is the consent of a democracy. In terms of an individual making a consent choice, I am not sure that that is the right way of looking at it.

Q108 **Carol Monaghan:** What about consent for their data being shared among Departments?

Sam Smith: Again, a citizen is rarely given a choice. Take settled status, for example. If you do not "consent"—if you do not accept that choice—



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you are threatened with being deported. That is not a particularly consensual choice. It is a case of the state making a decision that we will do things. The citizen should then be notified of what it is. In the NHS, there are a lot of places where you are asked, "Do you want this treatment? Do you want data to be used?" When it comes to individual choices by public bodies, a lot of it should be about transparency about how decisions are made.

Q109 Carol Monaghan: Let us take health data. Scotland is different because it shares health data fairly widely. That works particularly well. When I give my health data, should I be giving consent for that data to be shared with other Government Departments? That is nothing to do with settled status.

Sam Smith: Take the example of picking a local authority for public sector housing. There should be a framework that says what data can be shared. Then a citizen gets a choice about whether they go through that process or they prove their health status by some other means. Therefore, you can take the digital route or not take the digital route. Either way, the patient or citizen should know how that data is used. There should be very clear guidelines on how the data is used, looking at where it goes.

Q110 Carol Monaghan: Should citizens also be able to demand access to that data? Should they be able to find out how their data has been used?

Sam Smith: Arguably, you already can, but yes. You should be able to get a list of where it has gone. One of the problems we will probably come on to—it came up last week—is that data is not being used where people think that it should be. If a citizen can see how their data is used, they can ask, "Why wasn't my record accessed in this scenario?" when they think that it should have been. That is what we usually see. You start to get some bottom-up pressure, rather than pressure from Government or local authorities saying, "I want access to more data." Nobody ever said that they wanted access to less data.

Q111 Chair: Helen, do you have any views on consent?

Professor Kennedy: You are asking, "Should we do this? Should we do that?" All those things are things that we are required to do by law, under the GDPR. Consent is required. Access to information about what is happening to personal data is required.

These things are sometimes talked about in terms of personal data management models. Instead of talking about consent, people are talking about what model is best at enabling people to know what is happening to their data in a way that inspires trust and good citizen-state relationships. There is a lot of really interesting experimentation going on about how those models might be implemented in diverse areas.

In principle, I completely support citizens having more knowledge, access and control. Through my own research, I have found that people are



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quite fearful about how time-consuming that would be. It suggests a need for some trusted intermediary between citizen and state, or citizen and company that holds people's data, rather than—

Q112 **Chair:** Their having to make every decision.

Professor Kennedy: Yes, with all that responsibility—and the knowledge and understanding that are required. The danger is that they thoughtlessly click no, by default, or that they thoughtlessly click yes, by default. Neither is desirable.

Chair: I have found myself doing that many times.

Q113 **Carol Monaghan:** I think that there is a concern here, however. You are saying that this should already be available—that we should already be able to see the data that is held. As constituency MPs, we often get people coming to us who say, "Decisions have been made about me regarding x, y and z. I have no idea why those decisions have been made. Can you find out?" We cannot find out, either. That is a source of great frustration. Clearly, data is being used to make decisions, and there is no way in which individuals can access that. What you are saying is that that should not be the case at the moment.

Professor Kennedy: Even before the GDPR, there was a study across 10 European countries where researchers simply tried to exercise their data rights. The first step is to find the data controller and to ask them what data they have. In half of the cases, they could not even find who the data controller was. Therefore, the implementation of the law—

Q114 **Carol Monaghan:** There is some work to be done.

Professor Kennedy: There is some work to be done—but there is also lots of work being done. There are lots of advocacy groups and data justice researchers. There is a data justice lab at the University of Cardiff. It is not complicated to find mechanisms through which to feed all this into Government decision making around digital.

Q115 **Chair:** Do the Government need to be more proactive in leading the pursuit of a model that satisfies people's concerns?

Professor Kennedy: The way to do it is to get the new Centre for Data Ethics and Innovation to commission annual evidence syntheses in these areas.

Chair: That is interesting.

Q116 **Carol Monaghan:** I was going to ask about that. Are there are other recommendations that you would make for the new centre?

Professor Kennedy: One of my main interests is ensuring that measures respond to citizens' concerns, interests and needs. The first thing that I would say is that the consultation document for the CDEI said that understanding public views, and acting on them, would be at the heart of what it does. How is that going to work? How will that be



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implemented? Getting that right is a first step. It is an easier step to take than the step of regulating the global tech giants, which I have also mentioned.

Q117 **Chair:** Do you think that the centre should define some indices, which it will then measure on an annual basis? Is that what you are saying?

Professor Kennedy: That might be one way of doing it. What I am saying simply is that we should feed in the existing knowledge that is out there. Following on from what you said, Carol, the data justice lab keeps a data harms record—a running record of the things you are talking about: consequences to people's lives of decisions that have been taken on the basis of data held about them. The idea is to make visible the things where you say it is hard to know what is happening, because the processes are quite opaque. A bunch of organisations, advocacy groups and researchers are interested in that agenda. We could synthesise what is known and feed that into decision making.

Q118 **Carol Monaghan:** Sam, do you want to add to that?

Sam Smith: The question that you asked was about a constituent saying, "What happened?" The constituent does not have an evidence base for what decision was made and why. You can give them that evidence. They may come back and say, "Why was the decision taken? The data was wrong." A lot of the time, constituency MPs are dealing with a Government that are reliant on algorithms. Government just assume that the data is right. Official truth is far more important than actual reality. I think that we will see a lot more of that with settled status.

For public bodies, you need administrative law, because that is what public bodies are governed by. It is notable that the Centre for Data Ethics advisory board has no lawyers on it. I am not normally one to suggest that there should be more lawyers anywhere, but the Centre for Data Ethics is designed to give public bodies advice on data use, and there is no evidence of the law. The advisory board looks to be busy, and the chair has a history of using data in the public sector.

In terms of what should be done, points 6 and 10 of the current technology code of practice from the Cabinet Office have requirements on algorithms, data transparency and audit, but they are honoured more in the breach than in the observance. I am not sure that there is any service that hits all of them. It is a case of our being able to give citizens the evidence base. They may come back to you and say, "I don't understand this. Can I challenge it?" You can then have a conversation, but you are having a conversation that is based on fact, not on saying, "What happened here? I will go and talk to the Department." The Department is probably not going to tell you, either.

Q119 **Carol Monaghan:** Yes. That is an issue that we experience fairly frequently.

I will change tack slightly for my final question. How can we make sure



that Government-held data does not fall into the wrong hands?

Professor Weerakkody: Can I go back to your earlier question about constituents asking you, “How was my data used? I didn’t know”? Again, this boils down to the process, transparency and trust. You need to have the right mechanisms in place. A lot more work needs to be done around GDPR in informing and compliance. Big institutions are good, because they have the infrastructure and the mechanisms to do it. Ordinary citizens are unaware of some of the GDPR, what it means for them, as citizens, and how Government use their data.

A lot more work needs to be done, there needs to be clarity on the legal processes and people need to be held accountable. That is not done yet. The GDPR is there and we were all informed, as institutions, but that is it. It stopped at that, until a data breach or something big happens.

To protect the data, we need to make sure that it is encrypted and that all the safeguards are in process. We have had many data breaches in the past. They will continue to happen. That is where both the technology bits and the human bits—the legal infrastructure and so on—are important. A lot more needs to be done. It is still very early days.

Q120 **Carol Monaghan:** The question that I asked was, how do we prevent it from falling into the wrong hands? Are you suggesting that at the moment, if there is a lot more to be done, we do not have those protections properly in place?

Professor Weerakkody: I cannot comment on whether we have the protections in place or not, because I do not know enough about it.

Q121 **Chair:** Isn’t that what the GDPR is for?

Professor Weerakkody: The GDPR defines the rules, but it is too early to see what the consequences are. I cannot comment on the processes that are in place.

Professor Kennedy: I will add one thing. It comes back to the question about what recommendations could be made to the CDEI. One possibility is to stop all data sharing until, first, we are sure that we are aware of the harms and consequences you were talking about before and know how to avoid them; and, secondly, we can be certain that it is done in a secure way. That is a radical proposition, but it is being made in the US by the AI Now research institute. I am not sure how much it is being listened to.

Q122 **Chair:** Stopping the sharing of data could have awful consequences, surely—for example, within healthcare. With children at risk, for example, you could have awful failures of the system if you took that approach.

Professor Kennedy: Definitely. But there are really problematic harmful consequences that result from data sharing as well, because it is not being done in secure, trustworthy ways.



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Sam Smith: The question often comes down to what you mean by “the wrong hands.” Data may be given to somebody for one reason, but it then turns out that they did not use it for the thing that you wanted them to do. A lot of the time, it comes down to whether people do what they say they will do. Invariably, somebody screws up.

Q123 **Martin Whitfield:** My question is for Sam. You have talked about the transparency model. Earlier we talked about the consent model. Would I be right in saying that you have far more confidence in the transparency model than in the consent model for delivering understanding and safety?

Sam Smith: I work predominantly in the NHS. A&E has to work. We cannot turn A&E off for a day while they change something. People will have accidents, fall out of trees and so on. Generally, since there will be a requirement for health data sharing, for all the reasons Norman has just talked about, the best way of handling that is to give people full accountability of what actually happened and then to cope with that.

Most people will never look, and should never need to look. There was the story about Sir Alex Ferguson’s medical records over the weekend. Some people may have had a look, just to reassure themselves that the service was there, but it is not yet. In terms of what you can do within the current environment and processes, transparency about decisions is necessary to have an informed debate about what those decisions and processes should be. If you can have accountability, you can have transparency. You can actually have a feedback cycle.

One of the groups that gives out data in the NHS knows that at some point it will be lied to and will give data to somebody to whom it should not. It is those people’s job to make sure that that never happens on their watch, and they have all the processes in place. They set up the processes, and then people try to game them. It is their job to ensure that people never get through. They know that somebody will, and they hope that it will happen under their successor. Equally, they know that the value of health data and the benefits of having it are so high that eventually something may happen. It comes down to how you put as much confidence as possible into the system.

Q124 **Martin Whitfield:** What priority should be given in the design of Government digital services to the usability of those services by the citizen? I know that mention has been made of this earlier. I ask the question to open up that discussion.

Robert McLaren: As I have said before, usability is a wide concept. It should be applied to everyone. People are able to use services in different ways.

One point that I would make is that confidence that somebody will be able to use a digital service—when it is recommended that they register for self-assessment for tax, for instance—will depend on their experience with digital services across the board, particularly public digital services.



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If you had a hard time registering that you had a missing recycling bin on your council website, that poor experience may make you feel differently about gov.uk. Even though the gov.uk service may be quite accessible, the confidence is not there.

That is why the public sector web accessibility regulations are so important—they cover the whole of the public sector. We have heard about how, with GDPR, a lot of the challenge is as much in the implementation as it is in the letter. I would say the same about the new web accessibility regulations.

There is one thing that makes them new and that makes this a really promising opportunity to improve the usability of Government services. We have had the Equality Act for a while. It requires reasonable adjustments and digital accessibility. What has not been there with the Equality Act is enforcement, in a way that is a usable process for the citizen. It has relied far too much on people taking bodies to court, and nobody wants to do that.

In the research that I have led with Policy Connect, what has come across really strongly from disabled people's organisations, people in the sector and disabled people we have spoken to is that, to make the new web accessibility regulations work, we need an ombudsperson-type enforcement mechanism, where anyone can call a number and see their case dealt with in a way that ensures that they get good communication throughout the process and the case is dealt with promptly.

That is in line with the directive that we are implementing. It uses the word "ombudsperson," which suggests that that might be the way in which a member state goes and lays out the enforcement process as something that can be engaged with by the citizen.

At the moment, there are proposals for the enforcement process for the web accessibility regulations. The research that we have done suggests that there are some concerns about how the enforcement process is looking at the moment. It appears to be quite complex, involving a number of different organisations. Rather than have a single, independent ombudsperson-type regulator, we have the Government Digital Service involved in some elements of it, the Equality and Human Rights Commission involved in some elements and the Equality Advisory Support Service involved in others. The Minister for the Cabinet Office is a regulator for part of the regulations, while the EHRC is a regulator for another part of the regulations. It is not clear that that system is going to cohere into something that is really usable for somebody making a complaint about a public sector website.

Q125 Martin Whitfield: So that usability is structural usability, as much as anything on the interface of gov.uk. It is what sits behind that that needs to be looked at.



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Robert McLaren: It is the usability of the complaints process, if things do not go well.

Q126 **Chair:** How you enforce your rights.

Robert McLaren: Yes.

Professor Weerakkody: This goes back to the debate about usability. We have talked about usability for many years. Since the invention of computers, human-computer interactions have been there, and web accessibility guidelines are there. It goes back to the actual instruments. Whether it is reporting an abandoned motor vehicle, graffiti on a wall or rubbish-tipping, it is about the multichannel approach and what we are hoping to achieve there. It is about more than the usability aspect. It is about the whole process and the instrument that we are using.

Professor Kennedy: On an upbeat note, the good news is that compliance with web accessibility guidelines tends to make digital work for everybody, not just for the people with disabilities for whom those guidelines are in place. Compliance with the guidelines makes content more findable, for example, through searches. That is a good selling point to get people to comply with guidelines.

Q127 **Martin Whitfield:** By complying, you do not exclude anybody else. In fact, you make it easier.

Professor Kennedy: No, you end up being more inclusive.

One community of people with disabilities who are not well catered for by the web accessibility guidelines are people with learning, cognitive or intellectual disabilities, because their needs are more complex and it is harder to write code in a way that addresses those needs. For example, for people with visual disabilities, you can write code in a way that ensures that it can be read out well by a screen reader. It is more challenging for people with learning disabilities.

At the same time, if measures are taken to make written content more accessible for people with learning disabilities, that tends to be more inclusive. For example, in historical experiments—which do not happen as much any more—in which a simple version of a website was done for people with learning disabilities and a full version was done for professionals, everyone went to the simple version. It works for everyone, if done well.

Q128 **Martin Whitfield:** Robert, do you want to add something?

Robert McLaren: Yes. Another point of good news is that the accessibility of gov.uk—particularly the core interactive digital service functions on gov.uk—is widely regarded as having improved significantly. GDS has worked really well on that—not just following regulations to the letter, but doing user testing and elements like that. You can still find non-accessible content on gov.uk—for instance, PDFs that do not



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necessarily work with assistive technology. None the less, those interactive processes have often been worked on really well to make them accessible.

Q129 **Martin Whitfield:** What should the Government prioritise on designs moving forward? What would your one priority be? Hopefully, we will get four and push them all forward.

Chair: Keep to time, please. We are tight on time.

Sam Smith: Referring back to Graham's question, I would look at what Code for America has done with what they call the food stamps programme in California. It both acts as an advocate for the claimants, as a group, and works with the Department to try to improve the process, so that any problems get fixed and people do not fall through. I do not think that that is something that we do at all well here.

Professor Weerakkody: Will you ask the question again?

Q130 **Martin Whitfield:** If the Government were sitting here listening, what would you ask them to prioritise in designing their digital services?

Professor Weerakkody: They should move away from trying to look at technology as a solution. They should look at the actual policy and what we are trying to do here to improve our citizens' lives, convenience, accessibility and so on. They should then look at how technology can assist in doing that. It is not the only solution to the problem.

Robert McLaren: I have already mentioned the usability of the complaints system, if people need to use that. I recommend that that has further public scrutiny. There was a public consultation on the web accessibility regulations, but at that time the enforcement and monitoring proposals were nowhere near as detailed as they are now. That needs to be looked at again.

Specifically on the content, I think that there are real opportunities to look at new technology to offer people different forms of digital, as well as just digital or the phone. Potentially, you could use artificial intelligence to add assisted digital tools, so that personal assistants could help to guide people through websites. That is potentially something for the GovTech Catalyst fund to look at.

Professor Kennedy: I have already mentioned regulating the giants and listening to citizens' voices. The one thing that I will throw in—this comes from Cathy O'Neil—is auditing all stages of data-related projects: integrity of data, terms being used, definitions of success, accuracy of models, when models fail, whom models fail, consequences and effects.

Q131 **Chair:** Who do you think should be doing that?

Professor Kennedy: There need to be individuals within Government digital services whose job it is to do that.



Q132 **Martin Whitfield:** This is my very last question. Is there any area of Government that cannot be digitised—using the definition of “digital” that we have used today—from the point of view of the citizen?

Robert McLaren: The point that I would make is that, given the changing nature of technology, it is difficult to say for all time that such-and-such a service can never be offered as a digital option, along with other options. Therefore, I would be careful about ruling out innovation that could offer a service in a digital way. I stress again that, as you offer that digital service, you should also offer other options.

Q133 **Martin Whitfield:** Does anyone take the view that there is any area that should not be digitised? No.

Q134 **Stephen Metcalfe:** As we drive to digitise more and more Government services, not everyone is digitally connected. Do you accept that there is a certain sector of the community that is excluded from accessing these services? Does it apply to a particular demographic more than to others? What can we do to minimise that impact?

Professor Kennedy: That question has already been answered, in part, by Robert and others. There are groups who are not online, for various reasons, through choice or through inability to access tools, skills and so on. If digital Government includes always having alternatives to digital, people are not excluded. If digital Government means digital only, we have a problem. I think that Robert would agree with that.

Robert McLaren: On the other side, we should not assume that the non-digital version is always the more accessible for people. In some cases, if we were to offer only phone support, that would not suit somebody with a particular disability. For instance, somebody on the autism spectrum might want to access a service without worrying about a social interaction. Paper-based forms are something that I try to avoid, as someone who is dyslexic. Offering both helps on either side of whoever uses each type of engagement.

Q135 **Stephen Metcalfe:** Is there a danger that there are services people do not actually know about? Sometimes it is need-driven. I say, “I need something from the Government. How can I do it? I can do it online.” If I am not connected, I go and find it. By getting involved with a digital service online, you will discover more than you may already know, which is not as accessible in another form. What can we do about that? How do we inform people that they are missing out on potential beneficial services?

Professor Weerakkody: It all depends on how you define services. To me, paying my tax, taxing my motor vehicle, paying a fine or applying for a passport is not a service. Healthcare is a service. Education is a service.

I think that it is about informing the citizens of what is available. Gov.uk does that, and local council websites do it every well. What is important? For me, it is mostly local. If you look at the lifespan of a person, you find



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that their interactions are largely with local Government, rather than central Government. Local Government is acting as a bridge and is informing citizens by digital means, as well as by other means.

Providing information about what is available to citizens is important. For me, it is more about information and communication, rather than about missing out on a service. We rarely miss out on a service because, when we need the service, it is there for us. That is how I would like to see that.

Robert McLaren: One possibility, which may be slightly speculative, is to look at the way in which self-service kiosks have been used in lots of different industries. If there is an under-served area, creating a self-service point could be an innovation people could look at.

Q136 **Chair:** Is there evidence that they get used?

Professor Weerakkody: No. We tried it several years ago, and they were never used. Kiosks were removed in several local areas. In other countries, they are being used, but the culture of using self-service kiosks is not there in the UK.

Q137 **Chair:** Do you have any response to that, Robert?

Robert McLaren: As I said, it is an idea to be explored. If it worked, as it works in other countries, it could be brought in here. The new EU accessibility directive, which is separate from the one I talked about before, specifically covers self-service kiosks, so there is going to be a lot of innovation around how to make sure that self-service, public computing can be accessible.

Professor Weerakkody: Can I add one point? Look at self-service kiosks in the supermarket scenario. How many of us are slightly reluctant to go to the self-service kiosk because it is slightly more troublesome than being served by somebody at the counter? Research suggests that kiosks in Government have not worked. They are working in some small countries in the middle east, for example, where people are less IT savvy. I would prefer to sit down at my computer and do what I need to do. If I go travelling, I will use a self-service kiosk, but that is the only choice that I currently have.

Sam Smith: I do not have an answer to your question. Given the need for settled status and for the 3 million to go through that process, it may be a good opportunity to get Government to give some data on what they do there, what works and what does not.

Chair: Thank you very much. We appreciate your time.

Examination of witnesses

Witnesses: Dr Lugg-Widger, Tom Smith, Joel Bellman and Peter Fleming.



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Q138 **Chair:** Welcome, all of you. Thank you very much indeed for coming. I am not sure whether you were here at the start to hear my strictures about keeping your answers succinct, but we have quite a lot to get through and there is a panel of four people, so do not feel you have to answer every question if you feel that someone has already said what you broadly believe in. May we do quick introductions, starting with Tom?

Tom Smith: I lead the Data Science Campus at the Office for National Statistics.

Dr Lugg-Widger: I am a research fellow at the Centre for Trials Research at Cardiff University.

Peter Fleming: I am chairman of the Local Government Association Improvement and Innovation Board.

Joel Bellman: I am a partner at Deloitte. I lead our digital Government work in the UK.

Q139 **Chair:** How successful have Government been in sharing data across Departments to improve service delivery?

Peter Fleming: I think we have seen a backwards step over the last few years. GDS for—

Chair: That is not very encouraging.

Peter Fleming: It is quite interesting, is it not, that GDS was brought in to bring Government together, to knock heads together and to make them work? There were some personnel changes and some change of direction at GDS. What we now have is various Departments deciding to build their own digital empires. So, Health and Social Care, DWP and MHCLG all now have their own digital teams.

In some ways that could be seen as a positive, but, when you come down to it, it means that we have an unco-ordinated approach, particularly for local Government, who are trying to have one route into Government, particularly around data and digital.

Q140 **Chair:** Has this just sort of happened or has it been a deliberate choice to go down a different route?

Peter Fleming: You would have to ask the Ministers involved.

Q141 **Chair:** What is your impression?

Peter Fleming: My sense as an outsider is that it is personnel change, lack of concentration on it as a thing and a sense perhaps that it was “job done,” “mission accomplished,” but there was so much more to do.

Q142 **Chair:** We heard last week that Francis Maude had driven the strategy from the centre, as it were, in the Cabinet Office and that since his departure in 2015 there has been rather a loss of direction. Is that a view that you share?



Peter Fleming: It certainly is a view that I share. It is no surprise that ministries, when they see a vacuum, with no one directing them, decide they are going to do their own thing.

Joel Bellman: I would say that certainly in the past Government have been very good at sharing data, and it has become more difficult now without the central direction forcing things through.

Q143 **Chair:** You share the view that Peter has expressed, do you, that we have seen a drift and tendency for Departments to do their own thing?

Joel Bellman: I would agree that there has been less direction from the centre forcing the issue. I do not think that necessarily means that Departments are not doing the right thing, because Departments are still looking to meet their policy goals and serve their needs. Where there is a case for them to access or to share data to deliver outcomes, that still happens.

I would say that certainly some of the research that we have done looking at what citizens want suggests that citizens do want Government to share their data and expect them to. There is a lot of evidence to suggest that people would like Government to share data, particularly in the NHS, to improve services and local funding decisions. If it is not happening, it is due to the lack of clear leadership, seeing the business case to make that change happen, rather than anything malign, I would say.

Tom Smith: May I offer a slight counter-example? I think some of the successes in data sharing come around use of data and better data for better statistics and producing data by which others can make decisions. As an example, the Digital Economy Act enables and provides a legal gateway for data to be shared across Government with ONS for the purposes of research and statistics. That is not for operations and not targeting services, but for things such as improving your measures of GDP, which, if you are looking at economic change, is fundamental—a critical piece of data, data shared from groups such as HMRC on business taxes, so, VAT data, provided across to ONS at granular level, so at a very detailed level. The Digital Economy Act underpins that example. You do have examples coming through where better data is shared for better data and statistics to be published for others to use. That is the idea of Government using the data within the system to enable better decisions outside.

Q144 **Chair:** What are the main barriers to Departments sharing data? You have given a good example of where something has happened and has worked, or it is working. What are the barriers?

Tom Smith: You can often group data-sharing barriers into something around skills, processes and standards and something around culture, and skills—

Q145 **Chair:** What about legacy systems?



Tom Smith: Legacy systems would come under the processes and standards there. For example, in the ONS we have been working for a number of years on what we have described as data transformation. A lot of the conversation and discussion here is about digital transformation that GDS has led and pushed through. Data transformation for us is about better use of the data that Government own and that other organisations own for better services and better statistics.

The barriers: you need to understand and develop the data engineering and infrastructure that underpin the management, storage and safe use of data. Groups such as ONS within Government—and we have a very long history of using data, with about 175 years of the census—would spend a great deal of time on that infrastructure and understanding the legal and technical sharing issues, if you like.

Q146 **Chair:** Are you suggesting that across Government not enough time is being spent on getting those pieces in place?

Tom Smith: There are some good examples of data and digital teams having built those skills and understood what is now necessary.

One great success of GDS was enabling, facilitating and supporting a step change in the technical expertise and capability within Government. Looking from the outside, as I was at the time, that was very visible, very noticeable.

What we see now is that a lot of that expertise is within the Departments and I think some of the witnesses last week perhaps underplayed that—that some of the Departments have developed on the back of GDS's work very strong technical expertise, and that level across Government is now much stronger than it was.

Q147 **Chair:** That is not a bad thing.

Tom Smith: It is a very good thing.

Q148 **Chair:** It is a good thing that expertise lies within Departments, but does it mean that there also can be a loss of the co-ordination that was driven by a central, powerful GDS?

Tom Smith: I think some of the groups that are at leadership level—I would highlight the Data Advisory Board, chaired by John Manzoni, a permanent-secretary level board—are an important driver of the cross-Government data work.

Q149 **Chair:** Is it working?

Tom Smith: Then I would talk about the communities—for example, the data architecture community, that deep, technical geek stuff, which is really important. The level of expertise within the Departments suggests and shows that that should be a cross-Government collaborative group. It is chaired by the chief data architect within ONS. GDS is a key member of



that, but every major data-owning and data-using Department plays its role.

Q150 **Chair:** Thank you. This is a question for you, Joel, but, if you have other things to add, include them in your answer. In the evidence provided by Deloitte you stated that barriers to departmental data sharing lay within, “Departments (and sometimes even teams within Departments) seeing only as far as their own perimeters.” What needs to happen to encourage more joined-up work between Departments?

Joel Bellman: I would start maybe by taking a step back and saying that there are two very different categories of data sharing that we flitted between in the last conversation that we think apply here as well. On the one hand, there is data sharing about a particular person or case across Departments to fulfil a service outcome. For example, for DWP to provide universal credit, they need to know about my tax details from HMRC.

That is very different from sharing or analysing data in aggregation to create insights—for example, around GDP and so on. There are very different cases with them.

Certainly, in the former, the accounting officer silos create a barrier—there is no doubt about it. If I am working in one Department, my priority is usually to see to my perimeter, and, if I am working on programmes that cross departmental boundaries, the senior responsible officer should be able to look across those boundaries, but it is very hard to get out of that accountability silo.

Q151 **Chair:** That is where a more powerful GDS presumably can make a difference.

Joel Bellman: Yes, and a more powerful centre in its entirety. If you look at the role of the centre of Government, whether it be many of the arms of the Cabinet Office, the GDS or the Crown Commercial Service, there are many bits of the centre that can have a role in looking across silos and trying to catalyse and make change happen. They have a number of levers available to them: they could be strong, carrot-and-stick levers, as in, “We can force you to and use spending controls and hold you to standards”; they can also use funding levers through the way they allocate money to projects and programmes that are cross-departmental; and they can use softer levers. But the power of the centre in making things happen is very important in a settlement such as we have in the UK where there are departmental boundaries.

Q152 **Chair:** Is the weakness that we heard about last week and today from Peter, and so forth, resulting in our failing to exploit opportunities for more efficient deliveries of Government services where individual citizen data could be shared between Departments?

Joel Bellman: It certainly does make it harder. If you look back at history to how much progress was made during the years when GDS and the Cabinet Office had a stronger, evangelical message in a sense, but



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also look internationally at other countries where there is a stronger centre or a more cross-functional—

Q153 Chair: Can you give an example of where there is a frustration that we could be delivering a more co-ordinated, more efficient service where these barriers are getting in the way?

Joel Bellman: Examples that come to mind are these. If you look at aspects of our service delivery that cross departmental boundaries, such as at the end-to-end criminal justice system, to make that work effectively you have to join up across police, law, courts, probation and mental health in the community, which is very hard if you are in silos.

If you look at another example, borders, in order to join that up effectively you need to operate across Home Office, BEIS, DEFRA and port health authorities. It is very hard to do that when you are organised through silos.

The silo nature of Government is a barrier to adoption of transformational change, cross-cutting technologies and cross-cutting service transformation. There is, therefore, a role for the centre of Government to make that happen. How effective they are at that is correlated to how quickly things happen and how much they successfully achieve from it.

You see the same trend internationally when you look at the set-up in different Governments across the world.

Q154 Chair: Thank you. Is the right Government data currently accessible to external organisations that need to access it?

Dr Lugg-Widger: From our experience, we have been able to access data from the Department of Health and Social Care as well as NHS Digital, which I know is linked to that Department, and the Department for Education, so we have been successful in accessing data from those to deliver policy-relevant trials. We have also been able to access data from ONS, primarily for cancer trials, so there have been some successes.

Chair: That is a relief.

Dr Lugg-Widger: There are more data that we would be keen to access.

Q155 Chair: Where are you having problems?

Dr Lugg-Widger: The challenges are the time it takes to access the data. That usually comes when we are trying to access data from a number of Departments at the same time, so we are trying to do it in parallel.

Q156 Chair: Are there particular Departments where you have problems in accessing data?



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Dr Lugg-Widger: With the Department for Education we had delays. They have now just updated their process, and we have not gone through that new process. NHS Digital also took a long time and they are continually updating their processes to try to streamline that.

One main barrier we have had is where we have had to evidence our data security to show that we can hold data securely and have had to evidence that differently for each Department. Rather than just satisfying one Department and that being accepted by other Departments, we have to satisfy it in a different way using different toolkits or different data security questionnaires, and actually we are saying the same information in different ways. That does take time and is a challenge.

Q157 **Chair:** Are there things that Government should be doing to make data more accessible? Does it again come back to the need for a stronger central direction?

Dr Lugg-Widger: I do think that would help. Data security, reaching that standard and then being able to have that box ticked across Departments would be very helpful, as well as the purpose of a research project. If we have already received funding from the National Institute for Health Research—we have already demonstrated that there is a public benefit—having to demonstrate again what the benefit of this research project is to a number of Departments is time-consuming.

Chair: Quite frustrating.

Dr Lugg-Widger: Yes.

Peter Fleming: I think this comes back to Joel's point. It is almost two sessions: it is a session on big research-type data—ONS-type data—and then there is a session on how it affects you or me and how my data can be used to make my life better. Both are valid, but both are incredibly different in nature, purpose and outcome. Research is incredibly important. Big data is important, being able to see trends; all of that is important. Frankly, that does not help a child in care where you are trying to bring together five different Departments and a local authority. That, while helpful, does not solve the problem.

We have the same issue when talking to Departments on a granular, individual basis, saying, "We need all of you to talk to us in the same way."

There is some great work happening and there are some incredible people within Government—within Government Departments—but if they do not work in the same way, the irony is, as local Government, individual sovereign bodies are often being told that we have to do things the same way, whereas we have Government, who are meant to be a single entity, doing things differently.

Chair: Excellent. On that note, I will bring in Graham.



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Q158 **Graham Stringer:** Control over data policy has been moved to DCMS. Does anybody on the panel know why?

Peter Fleming: They at least sit in the Treasury, so perhaps it is to do with access to money.

Tom Smith: I obviously cannot comment on policy matters, but in terms of the shift and why that makes sense in linking data policy together with other parts of the work that DCMS is doing, DCMS is responsible for a number of the groups around data policy, including the work on the national data strategy and the digital economy. It is also, I think, responsible for groups such as the ICO, the Centre for Data Ethics and Innovation, in which I know this Committee has been very interested.

There are a number of areas of work and policy for which DCMS is responsible. From our perspective, bringing those together, we work well with DCMS; there are strong links with the better use of data team, which was one function that moved across. That helps and supports the community of data users and data strategy policy workers across Government. That network, that collaborative piece, is important.

Q159 **Graham Stringer:** Baroness Lane-Fox disagrees. She thought this was the establishment sabotaging the sharing of and access to data. Do you agree with her? There is some nodding.

Peter Fleming: I would, because if you look at some of the other ministries we have spoken about today—DWP and the Department for Health and Social Care—how seriously do they take DCMS? If someone from DCMS says to them, “You are going to behave in this way,” or, “We need you to behave in this way cross-Department,” is that as strong a message as if it was coming from the Cabinet Office?

Q160 **Chair:** You gave a very logical explanation for why it made sense. It was not a case of chasing a Minister around from one appointment to another.

Tom Smith: Strong leadership is always important, and ONS is an example. Under the watch of the national statistician, John Pullinger, ONS has moved a long way forward. There is always a possibility of that, but in terms of the logical aspects it certainly sits well. The proof of the pudding is what happens next and what you help to drive.

The key areas of development are around the national data strategy, in which DCMS has the prime role, and the linking of data and AI into the industrial strategy, which is a huge thing and is one of the four grand challenges. There are lots of big policy levers and policy drivers. For us, there is a sensible connection.

From our perspective, this is a community of work practitioners across Government that is collaborating in the next stage of using digital data transformation. That working across the piece is important.

Q161 **Chair:** But you do not share at all the sense that Joel gave us about the



silos that exist within Departments.

Tom Smith: I have only been in Government for 18 months. Coming from outside, I think you see silos in every organisation and in every sector. The cross-collaboration part of Government is astonishing—the level of working on technical aspects, which again is one area that I think GDS really pushed and developed that capability. That skillset has, I think, successfully been taken up across many of the Departments, which are working, iterating, starting small, having cross-functional multidisciplinary teams and working very close to their users, whether in policy, citizens or indeed delivery organisations. All that working has certainly been taken up and is much stronger across Government over the last few years.

The collaboration aspects and the communities, the networks and the senior leadership from the Data Advisory Board and so on can help work through the silos.

Q162 **Martin Whitfield:** I was going to look at the big data side, because the Government have to publish their data under the open Government licence, and I know, Fiona, you have indicated areas where you have come across problems with that. Tom, have you come across projects where you have had a problem because of the lack of availability of data from the Government?

Tom Smith: Do you mean around publishing data?

Martin Whitfield: Yes.

Tom Smith: I have a long interest in open data and that programme, coming from working in academia, then industry and now the public sector. The UK is still at the top of the open data barometer, and I think we are somewhere at the top of the implementation, so we are certainly among the front runners.

What you have is a general programme around open by default, but you balance that with publishing with purpose. As of this morning, there are 46,000-plus results on data.gov.uk, which is a mind-boggling amount, but the real priorities that are useful, and that as Government we need to be a bit smarter about, are working out which datasets and which pieces to push through.

From ONS, that has very much been our driver because we publish statistics and data for other users, so we spend a lot of time working out what users need and what they need us to improve—those aspects—but there is a great understanding and belief in open data and what is out there, and there are a lot of successes around use.

On the Committee inquiry's terms of reference, of questions around whether open data has been successful, I think you need to take a wider view of the open data programme than simply data.gov.uk. Data.gov.uk is a platform; it is a catalogue. It could be more, but it is just a



catalogue. Census data was made open in 2001 and the use rocketed. I started using the 1991 census when you had to pay quite big bucks for it. In 2001, there were very few organisations in the country at public-sector level that did not use that data—it was published openly—and similarly in 2011. The census is an eye-watering sum of investment into data infrastructure. It is £400 million-plus. The return on investment for that and its use in every single sector, from customer segmentation to whether our schools are in the right places through to what GP services we need, is around 10:1. That return on the investment in data is huge. There are great successes in open data.

- Q163 **Martin Whitfield:** That is excellent. I suppose that leads on to the evidence that was received from Direct Line that 11% of respondents have seen but not reported an incident—they feared it would make it more difficult to rent or sell their houses because it would flow into this dataset. What risks are associated with the Government publishing too much data—all their data? What is the other end of the scheme? It is very successful, but what is the other end of it?

Tom Smith: Open data, by definition, is non-sensitive, so it is data that has been aggregated up or that does not include personal details. The risk of disclosure of people's data should not be significant. That should be taken into account.

- Q164 **Chair:** The suggestion from Direct Line is that it is driving behaviour change because, if people end up thinking their road is getting loads of crime reported on it, it is going to make their insurance more expensive. Even if it is aggregated, with nothing personal, they still worry, so they do not report.

Tom Smith: So there is change back. On that, the trade-off between privacy and data use is around the value of that data: how is that helping to improve public services? That trade-off for me is around the misuse of data as well. The public rightly expect world-class services. Data is a key component of those services and a key ingredient to improve those services, so there is a trade-off there.

- Q165 **Martin Whitfield:** There is obviously a trade-off, but is there not also some work to be done in explaining big data properly to people, because part of it goes to transparencies, as we discussed in the previous session, and consent about that, and, yes, the data is scrubbed of identity and all that, but that is not what people on the street understand by it? Their perception is, "If I do this, I may be in a worse position." Is that an educational reform, in a wider sense? Is it a reform that the Government need to take account of? Where does the responsibility lie, given the value of big data?

Peter Fleming: The flip side of the example that you gave about a road that has more burglaries is that, if public services know that the road has more burglaries, we can put things in place to make sure that there will be fewer burglaries. It will feed into police and crime commissioners



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making a decision about what services they put in, and that is the part of the story we perhaps need to tell the public. Yes, there may be a downside, which is around insurance, but the upside is that you are more likely to get the investment that is going to stop your house getting burgled if people know that this is a crime hotspot. That is the positive side of aggregate data.

Joel Bellman: I would agree with that. I also think there is a whole category of good-news stories associated with open data that Government could be better accessing. In particular, you were talking in the earlier session about people's concerns about privacy and, "Why should I give my data to Government?"

One way you can help citizens and members of the public get more comfortable with giving their data and allowing it to be used and shared is by showing what it gets used for later and helping them to see the feedback loop. It is all very good to have big datasets such as data.gov.uk and 46,000 datasets, but not many people look at those. Government could do more visualisation—show, don't tell. For example, I like what you see in some cities, and Washington DC do this quite well, where they take data about their local transport network and create visualisations, visual maps that help people see where things are punctual and work on time.

You could choose problems where they have a very high impact, so disaster-zone situations where you can bring data together as they did in New Orleans after Hurricane Katrina to crush data together to help solve problems.

You could show how it makes a difference to local spending decisions. The one I liked was the London borough of Barking and Dagenham, which has its social progress imperative and all its local datasets, and again you can see the link from the data to the decision making. In there are hidden gems of good data.

Q166 **Chair:** Can you give an example of what Barking and Dagenham have done with that aggregation of data to improve their decision making?

Joel Bellman: To be honest, I have read about the data that they have produced and seen what they have done with the social progress imperative to aggregate and create data, and I have read on their website and seen press releases around how they are using it. I do not have specific examples of what they have done with it, but I am sure we could find out and maybe produce a note.

Peter Fleming: Lots of councils are now using data because, as there is less money in the system, we have to make—

Q167 **Chair:** Can you give an example of how it ends up with a better use of the scarce resource because you have evidence to drive policy?



Peter Fleming: Yes. Everything that we do is, in part, driven by data. I know the wards in the area where I am leader that have the highest deprivation. We have all of that. That makes sure that I am making those decisions, so I am putting the resource that I have into those places around some very specific indicators, whether that be around worklessness or nutritional outcomes to do with health data—obesity—

Q168 **Chair:** On your council, are you sharing any information with the police?

Peter Fleming: We share on a daily basis data and information about areas and about aggregating that over time so that we can see what that impact is. Councils up and down the country are doing that. For the first time—in a small district council—I have recently employed people who do data. Big councils have had data scientists for a long time. I now see smaller councils seeing the value of data in being able to make the right decisions at the right time and tracking the impact, but that is, again, on this aggregated dataset.

A lot of what we are doing now is saying: how do we use data for a purpose? A lot of this gets lost. In the last session, people were talking about this as well. We need to understand what we are trying to achieve and not get hung up too much in the stuff that is right in front of us. What is the big idea? What are we trying to achieve?

The one I love is around the red book. Anybody who has children will know that you get this red book, and it is literally a red book: in 2018 you get handed a bit of card. Why is that not digital? Why are we not giving every child in this country when they are born an electronic box that is theirs? It does not belong to the state; it belongs to them. The data goes in and then through life, education, national insurance, tax and health, everything sits in that box. It is not owned by the state; it is owned by you. I give you, as the state, permission to look into the box, around health or whatever. That has potentially the biggest impact in us being able to change the way people feel about data, because it is not owned by the state; it is owned by me. I own that, and I share it.

We looked at this with care-leavers, in particular. A care-leaver literally carries around a plastic bag with all their stuff in it—literally, a plastic bag. How is that right? That is where we could make a big change. I believe that parents would then say, “I want a digital box, because, frankly, I want to be able to have all my health records and I want to be able to move GPs and dentists and just be able to unlock the box so that they can see in.”

That is the change. As politicians, me being a politician and you being politicians, that is what we should be looking at. We should be looking at purpose: what is this purpose that we want to achieve?

Martin Whitfield: Excellent.

Tom Smith: May I add a short, concrete example of using data for, essentially, saving money? Lots of public agencies need to carry out



regulation and inspections—the Care Quality Commission, Ofsted, the Food Standards Agency and that kind of thing. How do you prioritise those inspections? You might do it on previous scores or on a random basis, but if you do it based on data around comments coming back in about these areas, what does the previous inspection text look like, not just the overall score, and other objective data sources, that is essentially the data analytics/data science project. It enables you to prioritise which ones you go to look at. You can still make the professional decision, “I may not agree with that prioritisation,” but it enables you to save a lot of time in randomly selecting which ones to do, with a straightforward saving back.

Q169 Martin Whitfield: It is, in essence, a more real-time evidential base for the decision rather than an archaic policy of once every three years or whatever it may be.

Tom Smith: Exactly.

Peter Fleming: There are councils in America that use TripAdvisor—they read reviews and “I got ill” is a red flag.

Joel Bellman: At the very start of all that comes the point when a citizen, a member of the public, decides whether they want to let you share their data or not. That decision could be made when I meet my GP, or when I apply for something in Government and I tick a box.

That is the point when a decision is made and that is the point at which Government can say, “Let us share your data. It will make public services better, save you taxes and make our country richer. It is a good thing. Please tick this box.” That is the point when you can make a difference.

Q170 Martin Whitfield: In essence, we need to go back to that sort of thing about the Government. If the Government could clarify, for example, by social media or whatever, the success of the aggregated data and the improvement that that has presented, that in turn loops back to the individual saying, “I am happier to share my data. It is my data, but I am happy to share it because I see a wider good, and I will offset that personal risk of my street perhaps having higher insurance because I genuinely see and believe that things will improve by sharing it.” Is that the ideal scenario?

Joel Bellman: We certainly found in the research that we have done, which I can share with you separately if you want, that some of the reasons people give when they say they are comfortable sharing data is usually when they can see the clear value and purpose of that: they know the rules around it, they can see the reason and they buy into that reason. It is why people share data with the private sector, because they can see the benefit: “I am going to get a discount voucher,” or whatever it is. If we can get Government into the same place, then you can enjoy the same—

Q171 Chair: We are a long way away from that now, are we not?



Joel Bellman: From being able to tell the good news on what we get from sharing data—

Q172 **Chair:** There is the clarity about the citizen giving their consent for the sharing of data, as it were, in the way Peter describes with his individual box from birth.

Joel Bellman: We are a long way away from that.

Peter Fleming: But that is what we should be aiming for. We could spend all our life looking at what is right in front of us and never actually move much further away from that. We need to think about how we want to make that big change.

There was talk about some very small states before, and Estonia is a classic example. I do not think we can do an Estonia, for the reasons that were given, but they had a big idea. They said: "We are leaving this way of doing Government and will do it this way." Sometimes you just need to make a big leap and then work out how you are going to get there.

Q173 **Martin Whitfield:** My last question ties into that slightly because there is always the worry that there are big errors hidden away in these datasets and so forth. How should the Government manage open datasets to avoid the potential risks? What is it that they need to do to stop the damaging side-effects of the errors?

Tom Smith: May I take that one up first? I think this question goes wider than open data. I think it is around all data use. You start from public trust and transparency, as has come out already: what are you going to do with this data? You publish all your research programme, you publish your data-use programme—this is certainly what we do at ONS, both core outputs, such as GDP, inflation and so on. The methodology is open, but it is also around our innovative use.

The Data Science Campus that I lead is looking at different sources of data—for example, satellite imagery and other sources. All our projects are open, so it is clear what we are doing, and all our code is open; it is shared through GitHub, which is a way of other coders and developers re-using. That transparency aspect is spot on.

The second one is around the legal framework, I guess, for how we are enabled to do this. That is where the Digital Economy Act, data policies across Government, data sharing and so on are important.

The third is regular updates. For example, around the census we run roadshows for professionals and citizens.

Then there is how you enable challenge—how data privacy campaigners or advocates and professional methodology folk all feed in. You need that venue, that forum, as well.



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At the ONS we have the National Statistician's Data Ethics Advisory Committee, which has independent experts who provide that kind of challenge. There are lots of ways to feed in, but we then need to respond and show how we have responded.

Q174 **Chair:** You are saying the ONS is the exemplar for everyone else to follow.

Tom Smith: Of course. I think we have a longer experience in using data, so a lot of the questions around digital Government are around better use of data. We are fundamentally a data-driven organisation, so we have spent a lot of time looking at that, but there is a huge amount of expertise across the system.

Q175 **Chair:** Fiona, do you have anything you want to add?

Dr Lugg-Widger: I agree with what Tom said, particularly the methodology and publishing it to demonstrate how you have reached the data that you are publishing.

The other thing is being reactive, so, if there are errors that have been identified, being able to rectify that with a clear audit trail, with version controls. That shows that you can respond to that, the next output from that Department can update that and you can be transparent about what happened and what the impact of the missing data or the wrong data was. I think it is about transparency.

Q176 **Chair:** I suppose the speed of your response helps to build trust—if people can see that it is being corrected quickly.

Dr Lugg-Widger: Yes.

Peter Fleming: There is a real issue, though, and a real live example of how the Government use ONS data. If you take the population data and the house-building numbers—the numbers of homes needed to be built in the country—the Government methodology says, "There will be this number of people and we need to build this number of houses." Then the ONS comes out and says, "Actually, the population data shows that you are not going to need this," and the Government say, "Yes, well, forget that. We will look at historical population data because we are going to stick with this methodology."

I have trust in the ONS population data, but because I do not understand the methodology that the Government are using to get to their house-building numbers, there is a real tension in the system where local Government is saying, "Hold on. We like Tom and the people at ONS because they are saying that the population is going to dip a bit," but the Government are saying, "No, we are going to keep going with historical trends."

Q177 **Graham Stringer:** They put it in their manifesto rather than any serious analysis of figures.



Peter Fleming: As to the ONS—and I will hand over to Tom—it is what it is, but data can be used in lots of different ways by different people, however good the methodology is behind it.

Q178 **Stephen Metcalfe:** There is lots of talk around data and the power that it has. It can be used as a force for good, but it presents potential risks for citizens. Do you think the Government in their approach to encouraging people to make data available are respecting citizens' privacy enough? Do they have the balance right?

Peter Fleming: I shuddered in the last session to hear that until Government have sorted out all the privacy issues no data should be shared. The reality is that people would die.

Chair: Yes. That was my sense of it.

Peter Fleming: It was shocking, but, of course, if you come from a very academic, purist view, I am sure that made a lot of sense. The reality is: will it ever be perfect? Is it a technological or a people problem? Most people would say it is a people problem. Data does not get shared by a computer; it gets shared because something has happened that is a human interaction with the data. As with everything, you have to take a balanced approach: are the benefits greater than the disbenefits and should we always be striving to increase the benefit and play down and reduce the risks? Absolutely, but I was very worried to hear that.

Q179 **Stephen Metcalfe:** I suppose the key part of the question is whether the balance is right at the moment or have we taken too precautionary an approach—that actually the data does not threaten citizens as much as perhaps they are sometimes told it does and we should have a more open approach.

Joel Bellman: It is interesting that you talk about the effect on the citizen. One of the starting points has to be: what are citizens' and the people's expectations as to the way data will and will not be checked? The people to answer that question are the public, not us in this room.

To extend Peter's example, you can see a situation where, if I needed medical attention and one bit of Government—the NHS—had my data and did not share it with the paramedic and I died, you can imagine me saying, "Why did you not share my data? Obviously, you should have done even if I did not give you permission, because that would have been the right thing to do." Equally, you can imagine the opposite, where somebody shares some data and you get told off either way. There is no universal rule, but the starting point has to be: what would a reasonable person think is acceptable and expect from Government?

Q180 **Stephen Metcalfe:** Is there any further comment?

Tom Smith: I echo what has been said. We have talked a lot about public trust as an implicit part of the responses, and certainly from a statistics organisation's perspective, public trust is fundamental. If people



do not believe that we are publishing good stuff, they are not going to use it, and if they do not use it, it is literally useless, so we might as well not exist. Other parts of the Government also fundamentally rely on public trust in obvious ways. That discussion around how we are using your data in order to provide better services is fundamental and I am glad that it has been raised in this panel and the previous panel.

Q181 Stephen Metcalfe: Do you think that conversation about trust, transparency and data with the public is taking place in a wide enough arena and getting to the people who could have something to contribute, or is it happening among us and we are all talking about it but the bloke down the pub really is not?

Dr Lugg-Widger: From the research we have done and are doing we are realising that people do not think about their data on a day-to-day basis. It is only when you start asking questions or you see something good or bad in the press that a member of the public would think about it, so I think there is more that we can be doing as researchers and Government to explain what it is that is done with their data for their benefit. We have already discussed that, but there is definitely more that can be done.

Peter Fleming: It goes beyond benefit: it is convenience. When we see a report about an online banking breach, do we all go and delete the banking app from our phones? No, because it is convenient to have the banking app on our phone and we entrust that someone is going to sort something out. Do we stop booking our holidays online because there has been a breach? It is convenient to be able to book your flight online.

There are lots of attitudinal aspects. The public will give people, organisations and websites loads of data, but if we as the public sector come along and ask for that data we are much more strictly controlled, and people, because we ask those questions in a different way, are much more reticent to give the data or to give that ability for us to share it. We are in a very odd place currently around the sharing of data, I think.

Q182 Stephen Metcalfe: I agree. I suppose the question is: do you think we are having a broad enough conversation with the person in the street about who they should listen to when it comes to discussions around how their data is used? I think about some of the more lurid headlines in the popular press that completely trashed a really good idea about sharing health data to try to find cures and work on spotting patterns that might prevent conditions in the future. People were told to be afraid and so they were. How do we have a conversation in which we say, "I am not going to listen to that headline and I am not going to listen to that headline. I will make the decision myself"?

Dr Lugg-Widger: There are initiatives. I do not know if you have heard of Understanding Patient Data—they are set up and funded by the Wellcome Trust—but they get out and have that conversation with the public. They also have a very user-friendly website that talks about



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patient data specifically—NHS data. I think that could happen with all other sectors of data where we are using it.

Joel Bellman: Government can lead by example by telling their success stories better, showing the cases where we have done something good. It could be, to use Tom's example, "We have saved some money. We have made something more efficient. We have saved a gazillion pounds out of our prescriptions costs, our medicines costs, by doing this analysis. Thank you, everybody, members of the public: look what you have done." Portraying it in that sense and telling success stories, being better at story-telling around it, will gradually ebb away at public reticence around this kind of thing.

Q183 **Chair:** Joel, in your evidence you indicated that sometimes concerns about privacy in Government Departments and Government services are overstated in a way that prevents the sensible sharing of data. I have seen it very much in the NHS where all sorts of barriers get put in the way of very sensible sharing of data that will improve someone's care. Can you expand on the evidence that you gave in writing on that?

Joel Bellman: That came from some research that we had done. We had conducted a survey of the public for some research, which I am happy to send you in full later if you would like. We looked at why people trust the Government with data and why people trust the private sector with data. We found that members of the public are much more likely to trust the Government with their data than the private sector, and when we asked people what data they were happy to have shared, over three quarters of the people said they would be very happy for us to share their data within the NHS to improve outcomes and care. Anecdotally, they then said, "Surely you are doing that anyway." That made us think that expectations around what the Government are already doing are out of kilter with what people think we are doing.

It comes back to the conversation we were having with Mr Metcalfe earlier about what a reasonable person would think. If a reasonable person thinks, "If I give my data to my GP, obviously it will be there in A&E if I need it, and it might be there in my local authority if I then need social care or care in the community later," then the fact that the Government do not do it is behind the times in terms of what people expect.

Q184 **Chair:** Is it fear of the lurid headline that Stephen mentioned that sometimes stops the Government doing what the public, as you say, expect the Government to do?

Joel Bellman: Government can be, for good reasons, their own worst enemy because they are much stricter with themselves in protecting data sharing, and, as Fiona said, they have much stronger controls in place. Data in Government tends to be better governed than data in the private sector. That is a good thing, clearly. I am not saying we should lessen that.



Q185 **Chair:** Do the restrictions go too far? Do they go beyond what is necessary?

Joel Bellman: I am trying to think. I have certainly seen examples of where Government Departments, agencies or authorities only looked at their perimeter and said, "Hang on, we have this data for this reason. If another agency wants to take it from us, our presumption is that we cannot share it with them because it has been given to us." That does come from a slightly narrow interpretation of GDPR and of the rules.

Again, that comes back to the need for some force in Government that looks across organisational boundaries and says, no, there is value in this; we should do that.

There are many examples of great behaviour. When sensible, well-meaning people get together and talk about how they can make the lives of citizens better and talk about how they can achieve outcomes, they almost always come up with the right answer, which is that they should share, collaborate and make things better, but the structure of Government means that you have to sit down and force that to happen rather than it naturally happening as a matter of course, because people do tend to look to their own perimeters.

Q186 **Chair:** Should the Government be measuring public opinion on the use of data, do you think, so that we have a better understanding of what people are thinking?

Joel Bellman: That would be an excellent idea. Understanding public opinion and what users' needs and expectations are is very important. I think over the coming years—well, decades—the use of data is going to grow exponentially, especially when you start to see the arrival of more analytics and artificial intelligence in interrogating data. That is going to take us into places that we cannot predict even today. Getting a baseline now as to what public acceptability is and allowing you to then measure that over time, and going back to the root of what citizens would believe is reasonable and normal, has to be the foundation.

Chair: That is very helpful.

Peter Fleming: There are two things. First, people think there is a file with their name on it being held somewhere and all their data is in one place. Frankly, it is not, and the more we talk about that the better.

I also think there is a generational thing, and that goes to the second part of what Joel said. If you look at teenagers and younger people now, the way they collaborate, the way they share is different from the way we shared in the past—the way they work. This is not just across data but working as well—much more collaborative, much more about a single document and everybody working on that single document rather than us doing our individual things.



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Attitudes will change massively around data and the benefits of data sharing. An understanding of data will change over time, so having a base point—it is a job for Tom to go out and do that—of what people are willing to share now and us beginning to message around the benefits of that and tracking that over time would be brilliant.

Q187 **Chair:** I suppose a young person may still be reluctant to allow their data to be used to be exploited financially, for example.

Peter Fleming: Yes, but the flip side is that we need that system change where I own my data and give you permission, rather than you have my data and I cannot see it.

Q188 **Graham Stringer:** You made the common-sense point that, if the individual is going to benefit from the sharing of health data, that is what should happen, but what if the state is the beneficiary? If the state holds information on benefits, employment and accommodation status, should that data be shared across Government? As I understand it, at the moment it is not.

Joel Bellman: I guess very often when the state is the beneficiary the taxpayer is also the beneficiary, and citizens, being taxpayers, would benefit from that—indirectly, of course. That is an important place to start.

I find it difficult to disentangle the state being the beneficiary from the end citizen being a beneficiary, except maybe in examples of criminal proceedings or something, where the individual might not want their data to be shared because they may be put behind bars; I can see that. But, in most areas of public service, if something is good for the country, it is good for the people in the country and it is good for the Government of the country. They should be as aligned as they can be.

Q189 **Chair:** That is because of a more efficient use of resources and so forth.

Joel Bellman: Certainly. Making the business of Government better by sharing data more efficiently, reducing the cost of Government, making Government more responsive, allowing Government to innovate and create new public services that meet policy outcomes and citizens' needs is, to me, an example of state interests and citizens' interests being aligned, not contrary to each other.

Tom Smith: I want to add a couple of general points. The starter point is that data sharing is hard, and should be hard, because this is very sensitive stuff, so we have to treat it sensitively and sympathetically and understand the public trust issue.

That leads on to the point that all the uses of data within Government and for sharing outside Government should be made clear to the citizen—the questions around whether we should be doing more promotion and development of examples, and so on. I think, absolutely, yes, that sort of communicating of what is being done in a good way is a strong place for



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Government to be. The questions around, for example, the NHS—"our NHS"—that kind of conversation, and this is a public good, so, "Are you generating value for the Government or for the UK?" is a very important area.

The bottom line is that the data underpinning this drives services for me but also my family, my community, my local area and the UK as a whole, so we need to be very clear on, "My data helps drive those bits," and this is the example of where it is being done.

Q190 Chair: There is a tension, is there not, if you take, for example, NHS data, the principles of open data being that all the data is available— anonymised, to protect privacy—but anyone can then exploit it to improve services, potentially to make a profit from developing a particular service, and then, on the other hand, the opportunity for Government and the NHS to make money out of the provision of data that may be commercially exploited and the money that they make can then benefit all the patients in the country? How do we reconcile this tension between completely open data and opportunities to make money for the NHS and, therefore, for patients?

Tom Smith: Open data can be used by any group for any purpose. That includes charities and foundations; it includes public sector and profit-making organisations.

Q191 Chair: But also commercial organisations.

Tom Smith: That is part of the deal and you are supporting the economy and the economic development and so on. The question here is around sensitive, underlying data that may be available through things such as the secure research service that ONS runs, which enables researchers to use microdata under certain circumstances. If you are working on public outputs, you can run analysis with it on the microdata that is held within the system.

Q192 Chair: But in another inquiry we have looked at algorithms that can be developed using anonymised patient data within the NHS, potentially giving opportunities for enormous commercial exploitation. Do we just take the view that the principles of open data apply and that everyone benefits even if the profit is made by some data company in the States, or do we say, "There is a deal to be done here. The NHS has a unique dataset. You can develop the algorithm. Let us do a deal that benefits patients in the NHS"?

Joel Bellman: One starting point to be able to even address this debate is having the skills in the right part of the Government to be able to understand the value of their data. Tom talked earlier about the rise in skills of data science led by ONS but across all of Government. It is a barrier today. If I am a Department or a local authority and I have a dataset, I need some skills in-house to know what I can do with it: where can it have value, where should it be open and where will—



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Q193 **Chair:** But if you applied the principle of just open data, you would not even need to worry about understanding internally.

Joel Bellman: Absolutely, but then you would create risk. If you release too much, first you could create risk by releasing things you should have anonymised, and, secondly, you could miss valuable commercial opportunities that would benefit the taxpayer.

Q194 **Chair:** Exactly, and that is the point. Having skills in-house, as it were, should we be looking at ways to exploit the value of data for the benefit of the taxpayer or the patient in the NHS, or should we just be saying: apply the principles of open data and make it all available?

Joel Bellman: I would go back to what the citizens expect—what they want. If you are going to follow your suggestion earlier of understanding citizens' expectations and forming a baseline on that, understanding what citizens would think would be reasonable in that situation is a very good starting point.

Peter Fleming: I will give you another example. One thing that parents, particularly of primary school children, want to know is what the admission criteria is; on a map, what does that look like? No local authority draws the map, but put the data out there, put in the school data around what its admission criteria are, and that allows an individual to produce an app that shows real-time, overlaid on a Google map, what the admission data for a certain school is.

That has value to the parent because they know whether their house is going to be in it and whether to apply. I would say under the principles of open data that that is brilliant. It is something that the local authority probably would not have the time or energy to do, but it has the data, so put that out there and let somebody else do it. How many phone calls would that stop of parents who thought their child was within the catchment area? Suddenly there is a value to them not calling up, writing, appealing or doing all those things because someone has used the data and put it in a form that normal people can use.

That is at the extreme end of open data, but are we missing an opportunity by not putting the data out there in an open way that someone will come along and use it? New York puts all its data out there, but I also see the flip side for something like the NHS where the insurance companies and the private medical companies would be circling like hawks to take that data. But if they used it and people got better, is that a bad thing?

Q195 **Chair:** Okay. Are there any final comments from any of you before we close this—anything you were desperate to say that you have not yet said?

Dr Lugg-Widger: The one thing I would say with regard to NHS records is that NHS Digital do have their national opt-out programme now, so they are already putting the decision back into the public's hands about



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whether they want their data to be used outside their clinical care. That is already happening with the NHS.

Chair: Thank you for that.

Peter Fleming: For me it is about consistency across Government Departments so that we find it easier to work. We provide way more services than Government and it would be handy if there was a clear line of sight into all Departments.

Q196 **Chair:** You think that is lacking at the moment.

Peter Fleming: I think it is.

Chair: Thank you.

Tom Smith: We need a continued drive for data transformation. There is an ongoing piece here on the work that GDS kicked off around digital. It is across Government and I would think that public trust and public debate is a big part of that, coming back to how we use data to drive better services.

Chair: Thank you all very much indeed.