HOUSE OF COMMONS

# Public Accounts Committee

## Oral evidence: Digital transformation in the NHS, HC 680

Thursday 17 September 2020

Ordered by the House of Commons to be published on 17 September 2020.

Watch the meeting

Members present: Meg Hillier (Chair); Olivia Blake; Sir Geoffrey Clifton-Brown; Sarah Olney; James Wild.

Gareth Davies, Comptroller and Auditor General, Robert White, Director, NAO, and Marius Gallaher, Alternate Treasury Officer of Accounts, were in attendance.

Questions 1 - 89

### Witnesses

I: David Williams, Second Permanent Secretary, Department of Health and Social Care; Matthew Gould CMG MBE, CEO, NHSX; Sarah Wilkinson, CEO, NHS Digital.

HOUSE OF COMMONS

# Report by the Comptroller and Auditor General

# Digital Transformation in the NHS (HC 317)

## Examination of witnesses

Witnesses: David Williams, Matthew Gould and Sarah Wilkinson.

Q1 **Chair:** Welcome to the Public Accounts Committee on Thursday 17 September 2020. We are here today to discuss digital transformation in the NHS, a knotty issue that the NHS and the Department of Health have been grappling with for many years. I should say that this is based on a National Audit Office report, most of the work for which was done before Covid. While the report is not directly linked to Covid, we would like to cover some of the issues around Covid, as we have important witnesses in front of us today.

I would like to introduce our witnesses. We have David Williams, director-general for finance and group operations, and now the Second Permanent Secretary at the Department of Health and Social Care. Welcome back to you, Mr Williams. Matthew Gould is the chief executive officer of NHSX, a new body set up to deal with some of these issues. Sarah Wilkinson is the chief executive of NHS Digital. These are really important witnesses when we look at the challenges faced with digital.

Mr Williams, I would like to turn to you first on the money that is coming to the Department for testing. On 3 September, you announced £500 million for mass testing but, since then, we have had the Prime Minister talk about Operation Moonshot. Can you tell us how much that £500 million is expected to buy, first of all?

***David Williams:*** Yes. That initial allocation is there to undertake some trials of new testing technology and to invest in new types of test kit with a more rapid turnaround, so that we can develop a plan for how mass testing could be delivered in the future. It is not intended to be the full cost of delivery of such a programme through the winter or into 2021. It is primarily around investment in technology, proof of concept, trials and so on.

Q2 **Chair:** You have had that money allocated to you. Do you have a plan yet for how to spend it? Has any of that gone out of the door in the last 14 days or are you still working up plans for how to procure the research into new testing techniques?

***David Williams:*** There are plans in place and commitments have been made against that £500 million for small numbers of new types of test for us to validate both in laboratory settings and then live in controlled trials. We are also investing in rapid-scale processing equipment for some of these tests. We have a plan for committing that £500 million and, indeed,

for how we might spend a modest amount of additional money beyond that as we progress through the autumn.

Q3 **Chair:** How much of that £500 million have you committed so far?

***David Williams:*** Pretty much all of the £500 million is now committed in terms of our plans. I can let you have a note of how much of that is on contract. Spend against the £500 million is spread out over a number of months.

Q4 **Chair:** You mentioned contracts, which is the next big issue. How have you approached contracting for something that is cutting-edge science? We have the Coronavirus Act, which does not require you to go through the normal procurement process, but can you just walk us through what you have done and how you made sure that you, as the money man, are getting value for money out of these contracts?

***David Williams:*** Where there is a particularly clear sole-source supplier of a new technology, or the need for speed to getting to an assessment of new technologies is sufficiently important, we are using direct awards. That is primarily to purchase initial quantities of tests with an assumption that there would then be an opportunity for downstream competition, if that is the state of the market.

As you look to ramp up testing capacity beyond the 500,000 tests a day that the Prime Minister has set out for the end of October, in practice we are going to be reliant on a range of types of testing, so there will be an opportunity for more normal procurement processes running through our procurement frameworks, including the new Public Health England procurement framework that is coming on stream this autumn. For now, our commitment is staged and we undertake benchmarking on cost per test, for example, as a way of understanding the value for money we are getting for the taxpayers' money we are spending in this area.

Q5 **Chair:** I am sure the Treasury will be as glad to hear that as we and taxpayers are. Can I ask about the Moonshot proposal and 10 million tests a day? It is a big ambition. How much more money do you think you are going to need for that? How much will that £500 million buy towards Moonshot?

***David Williams:*** The 10 million figure, although reported in the press, is not the headmark that we are aiming for. It is in the nature of a moonshot-type approach that you start off thinking quite imaginatively about what you might look to deliver, rather than building incrementally on the capacity that we currently have.

**Chair:** That was put very diplomatically, Mr Williams.

***David Williams:*** I am not currently expecting that that will be where we end up in the level of testing capacity that we build. Another issue for us, as we get into the role of testing in steady state, rather than simply getting through this winter, is the balance between testing provided by the state

for clinical reasons—patients in hospitals or care homes, and key workers—and testing to allow the opening up of normal life. It is not necessarily that all of these need to be procured and paid for by the taxpayer.

Q6 **Olivia Blake:** These questions are to Mr Williams. Earlier in the pandemic, the reason for difficulties with capacity was reagents, and that was repeated a number of times. I just wanted to understand what the issue with capacity is at the moment. Is it the workers to conduct the tests in the lab, the lab space or a lack of PCR machines or other such analysis?

***David Williams:*** I am not sure that there is much more I can sensibly add to the information that the Prime Minister and the Secretary of State have shared with the House this week. Dido Harding is giving evidence to the Science and Technology Committee later today. It is worth highlighting that, as the Prime Minister set out yesterday, we have a trajectory to deliver 500,000 tests a day by the end of October. We are, essentially, on track against increasing our testing capacity to meet that ambition. We are capable of testing around 100 times more people a day than at the start of the pandemic.

While, of course, in a population-scale enterprise like this, there will always be day-to-day operational challenges, which are addressed, identified and sorted out, the particular challenge that we face at the moment is the mismatch between demand and capacity, rather than capacity falling short of where we expected it to be.

Q7 **Olivia Blake:** Thank you for that answer. I do not think we really touched on what the issue is there, so I am going to ask all the questions, because I had questions about whether it was one or the other. These tests are not rocket science. Do you not think that the money for Moonshot would be better spent on the current testing technologies and capacity?

***David Williams:*** There are different use cases. Even within the current capacity, there are tests for which a rapid turnaround is particularly important, and other tests for which accuracy is a more important factor. We have a blend of testing routes now, matched to the use cases. The point about investment in future technologies is that it might allow us to deliver current testing activity more cheaply, more reliably, at greater scale or with a quicker turnaround. Innovating in this space is a perfectly sensible thing to do. There is then a choice about how those new tests are deployed.

Q8 **Olivia Blake:** That does not tackle the issue of the here and now or the second peak. If the issue is lab space, how many universities, research sites and private labs have been approached for their space?

***David Williams:*** I would have to ask Dido and the testing team to write to the Committee with that information, I am afraid.

Q9 **Olivia Blake:** If the issue is the recruitment of staff and how many staff we have, how are we going to recruit for the four new labs, and what is the size of those labs?

***David Williams:*** As I say, there is a plan to increase capacity, which we are delivering. As part of the follow-up information, we can set out how we get from the current level of testing capacity of around 250,000 a day to 500,000 by the end of October and what that means in terms of lab capacity, consumables and staffing. We are essentially on track with our capacity plan. The challenge is that demand has grown substantially more quickly than the capacity that we had planned to deliver.

Q10 **Olivia Blake:** If the issue is recruitment, have you considered a similar callout to ex-scientists, as was done with the NHS for nursing and medical staff?

***David Williams:*** I am studiously trying to avoid agreeing that that is particularly the challenge here. Let me ask the testing team to set out where they are on capacity, what comes next and which are the particular potential pinch-points that they are actively managing as we expand for the autumn.

Q11 **Olivia Blake:** That would be very useful for the Committee because it would be difficult to know that this money is good value for money if we do not know the actual issue. The final question is about keyworkers. Lots of keyworkers do not drive. In my own city, the two walk-in centres have now closed. I am concerned about keyworkers not being able to access tests. Have you done any assessment of the impact of these closures?

***David Williams:*** The testing team look quite actively at the delivery channels and which of those are best suited to which use case, whether it is keyworkers, NHS and social care staff, care homes, elective patients and so on. This is an area that they keep under active review. As you have seen, we redeploy testing capacity to particular areas of concern as part of our local intervention strategy, so it is quite a dynamic position and a range of factors are taken into account on how best to deploy testing capacity, of which access and the ability of people to access particular channels is part.

Q12 **Olivia Blake:** The Committee has also been concerned about care homes and testing in the past. How is this current issue impacting on the access of care homes to testing?

***David Williams:*** As the Secretary of State said to the House earlier in the week, we will shortly be setting out the basis on which we are making prioritisation decisions for testing within the capacity that we have available. As that is set out, we will see that protecting a meaningful level of testing capacity precisely for care homes—for staff and people in care homes—is a high priority and factored into that prioritisation process.

Q13 **Sir Geoffrey Clifton-Brown:** Good morning, Mr Williams. I have to say I have listened with exasperation to your replies because they have not contained precise detail. In such a serious situation, I would have thought you would have had the replies at your fingertips, so can we try one or two very precise questions? At this moment, what is the laboratory capacity per day to analyse and produce results of tests? I am not talking about the capacity for testing but the laboratory capacity for producing results.

***David Williams:*** I am afraid I am going to have to fall back on my point that, while I absolutely understand this is an interest of—

Q14 **Sir Geoffrey Clifton-Brown:** Forgive me, it is not an interest. It is absolutely crucial to the whole Covid-prevention strategy.

***David Williams:*** Yes. I absolutely get that it is a topic of high interest to the Committee and central to our strategy, as the Prime Minister set out at the Liaison Committee yesterday. While I am the accounting officer for test and trace, operational delivery and capacity issues are run through Dido Harding and her team. It would be more appropriate for her to provide the information that you want and we can arrange for that to be done very quickly.

Q15 **Sir Geoffrey Clifton-Brown:** It is extraordinary that you should come before this Committee today—you must have high-level meetings every day—and not know the answer to that vital question.

***David Williams:*** My expectation is that some of this information will be set out by Dido at the Science and Technology Committee later today. That is a more appropriate route than it coming from me, given that these are issues for which I do not have direct responsibility.

Q16 **Sir Geoffrey Clifton-Brown:** Let us try another one. You are involved in a form of rationing at the moment. How is that being done?

***David Williams:*** As the Secretary of State set out to the House earlier in the week, we are prioritising demand against the capacity that we have available, and more details on the way in which that prioritisation takes place will be set out in the next day or so, I expect. He set out to the House the top priority of supporting patients and then staff in NHS and social care settings. I have just touched on the protection that we are giving to testing in care home settings more generally. We are continuing with an important range of surveillance testing.

Q17 **Sir Geoffrey Clifton-Brown:** We know all that, Mr Williams. Can we try to keep these answers fairly brief, as we have an awful lot to get through? If you cannot tell us how it is being rationed, can you give us an assurance that anybody who is displaying symptoms in any area will be able to get a test relatively close to where they live?

***David Williams:*** Our ambition is that people displaying symptoms should be tested and should get those test results back quickly, so that they know what action to take.

Q18 **Sir Geoffrey Clifton-Brown:** It may be an ambition. It was a reality until about the last three weeks. I understand the demand has gone up, but in your rationing programme you should be able to give an assurance to this Committee that the rationing will be such that anybody who is displaying symptoms can get a rapid test relatively close to where they live. Otherwise, the whole Covid strategy is beginning to break down.

***David Williams:*** That is certainly the intent, and that will be clear when the detail of the prioritisation process is set out by Ministers in the next day or so.

Q19 **Sir Geoffrey Clifton-Brown:** This is the final question from me, you will be glad to know. You talked about these portable tests. How far from reality are they? They will, presumably, obviate the need to go through a laboratory.

***David Williams:*** We have been testing some in Southampton and Hampshire. We are looking to start another city pilot very shortly. The intention is that we will be able to deploy these, if those pilots work, as part of our plan for managing testing capacity through this winter.

Q20 **Sir Geoffrey Clifton-Brown:** You have not answered my question. How far are they from reality?

***David Williams:*** It depends. The tests exist now and a number have been subject to initial validation. We want to trial them to see how usable they are, what results we get and how they factor into our plans. It will be an issue to resolve over the coming weeks and a very small number of months.

Q21 **James Wild:** Mr Williams, a particular issue that has happened in Norfolk is that people have registered for tests, been given a slot and arrived at the mobile test station but have been asked for a QR code, which the system has not given them. They have then been turned away, despite the fact that no tests are taking place and there is a lot of capacity being reported. Is that acceptable? If not, what is going to be done to make sure that, if people turn up, the common sense approach is applied that, where there is capacity, they should have a test?

***David Williams:*** I do not want to get into the specifics of that case, but the logistical and operational challenge of delivering testing in these sites is quite high. Common sense can, indeed, be applied where that makes sense. The best thing, I am afraid, is for me to ask Dido and the testing team to give you a specific response on the way in which the flow of individuals at test sites is handled when people who are turning up do not match the expectations of people we have booked in.

Q22 **James Wild:** That would be helpful because, as you can appreciate, it is incredibly frustrating when people turn up and the people who are conducting the test say that they have 500 tests that they can do, they have done 50 but, "Without a QR code, you cannot have a test". That is often after they have spent a couple of days trying to get a slot for that.

I have a question on your role as accounting officer. What is the average cost of the Covid-19 tests that are taking place?

***David Williams:*** The average cost is not a particularly helpful number. I can send you the range of costs. For some of the tests, we are just buying the consumables and then processing those through labs where we have contracted separately for capacity. For some tests, we are contracting for

an end-to-end service. It is quite a blended average. To give you a broad sense, a lab capacity cost of around £40 per test is a benchmark. If we need to surge, I am willing to spend more than that. The kind of mass testing, non-lab capacity tests that we are looking at will be less than £10 a go. It is that kind of scale.

Q23 **James Wild:** It would be helpful if you could give a note to the Committee with those blended points, to set that out in a bit more detail. Perhaps I can turn to Mr Gould now to talk about the contact tracing app, which, in April, was said to be coming in within a few weeks. A lot of development was done and the Isle of Wight trial happened, and then a whole reset was taken. Why has it taken so long to work out how to do this?

***Matthew Gould:*** It is sensible to put it in context. At the start of the pandemic, we were trying a lot of things that we knew were risky and experimental, not only in technology but in other areas. Some of them have worked out extremely well; some of them have not worked out in the way we expected. When we started, it was before the Google and Apple framework had been announced or developed. Very soon after that framework was announced, we set up a parallel strand of work so that we had optionality on what we did.

Unlike a lot of countries, we then tested very extensively to make sure that we understood the effects of what we were planning to put out, how it was working and how people were interacting with it. On the basis of the tests, we shifted course and, as has been publicly announced, the app will be put out next week. It will have a lot more functionality, though, than just contact tracing. It will be a very good product and will really help.

Q24 **James Wild:** That is an important issue. When this was first talked about, it was talked about as critical to successful test and trace. Then it had the impression that it is a bit of a "nice to have". Are you saying that this is going to be a core part of test and trace, and what impact will it have on the percentages of people who are successfully traced?

***Matthew Gould:*** When we started, the test and trace programme was not set up. It was on its own, as it were. Since then, NHS Test and Trace has been stood up, and the app is now sensibly embedded in that programme. It will not be just a contact tracing app; it will be the digital part of that programme. As I said, it will have other functions too, giving people information that will be useful to them.

I would not like to put a percentage figure on the impact it is likely to have, partly because there are so many variables, including the number of people who download it. The more people download it, the more impact it is likely to have.

Q25 **James Wild:** You are launching next Thursday. I assume that that is a hard, fixed deadline that will not change. This depends, as you say, on people downloading it. Are you going to encourage hospitality and other venues to require people to use the app to come into their premises rather

than, for example, writing things down on a bit paper? That would drive uptake, if you had to have the app in order to enter a premises. Is that something that you are considering doing?

***Matthew Gould:*** Yes. By way of background, my team and I at NHSX took the app forward for the first stage of its development. When NHS Test and Trace stood up, the process moved over to them, so it is not my team that is going to be launching it next week, although we remain involved.

In answer to your specific question, one of the key bits of functionality of the app that is going to be launched next week is precisely that. It will be a QR code reader, so that, when you go into a bar or restaurant, they will have, hopefully, downloaded a QR code that they can display. App users can read that QR code and it will make contact tracing people who have been in that venue much easier.

Q26 **James Wild:** You said that the responsibility has passed across. It might strike some of my constituents as being a bit odd that an organisation called NHSX has passed this over to non-specialists, as it were, to develop the app. Is that fair?

***Matthew Gould:*** No. The logic to it is that it made perfect sense. This was a move that I helped initiate. It made sense that, when NHS Test and Trace was stood up, the app should be firmly embedded in that programme. It is not being developed by non-specialists. There are superb development teams working on it. It has excellent leadership, with a great deal of experience of developing technology, so I am very confident that it is in good hands.

Q27 **James Wild:** I want to go back to Mr Williams. Again, from an accounting officer perspective, what has been the cost so far of the attempts to develop this app?

***David Williams:*** First, as a point of context, Chris Wormald and I both gave evidence to the Committee in previous hearings on Covid costs. Given the scale of the challenge, we have had quite a high appetite, consistent with protecting value for money for the taxpayer, for spending some money on developing innovations and techniques that may help us, even if the case was not proven at the time.

The spend on the initial app was in the order of £10 million to £20 million, some of which has been—

Q28 **Chair:** Sorry, you said "in the order of £10 million to £20 million", which is quite a big gap.

***David Williams:*** The figure I have in mind is £11 million.

Q29 **Chair:** In June, the Minister Lord Bethell said £11.8 million. Going back to Mr Wild's question, what is the total cost now?

***David Williams:*** The forecast figure for spend on developing the new app and then supporting it through the rest of the financial year, in my

estimate, will be around £25 million. Some of the spend on the first app is relevant to the app being rolled out next week. You have an £11 million figure for the first phase and then around £25 million for the second app, but Mr Gould may just want to give you some more precision.

***Matthew Gould:*** We estimate now that the cost of the first stage of development with the original app was £10.8 million. Of that, £800,000 was focused on the Google/Apple parallel track, which is now the one being developed. Of the remaining £10 million, we estimate £6 million was on development that would have been necessary, regardless of which version we chose, so that has led to capability, insight and so forth that underpins the current app; £4 million was specific to the version of the app that we moved away from.

Q30 **James Wild:** On the creation of the National Institute for Health Protection, Mr Williams, how are you going to ensure that Baroness Harding has access to the digital skills and capability that she will need in bringing those organisations together?

***David Williams:*** Let me answer in a twin track. The immediate priority in bringing the organisations together is making sure we have joined-up operational delivery for the winter, as we then think about how, in parallel, we formally launch the organisation from April next year. Digital skills are, as you say, going to be critical to the success of the national institute, whether that is in supporting the public through the user journey, delivery of the logistics operation on a day-to-day basis, or through data analysis of the progress of the disease.

The resourcing questions really are a blend of moving digital experts within the Department and wider civil service into test and trace roles; drawing on external support where there are particular skills that the civil service does not have immediate or ready access to; a combination of short-term appointments, where that makes sense, and specific pieces of work; and, as Mr Gould has highlighted in talking about the app, using expertise from NHSX and Sarah Wilkinson's organisation, NHS Digital, where they can play a supporting role. We are taking a broad-brush, multi-layered approach to ensuring that we have the right technical and digital skills in the organisation, both on launch next year and, critically, through the winter period.

**Chair:** We need to now move on to the main succession. On the issues that we have been talking about, the National Audit Office is having a good, hard look at the numbers as well. Mr Williams, we know that you are the money man in the Department, so hopefully we have a shared interest in watching these vast sums of taxpayers' money going out of the door. We do not object to them being spent, if they are delivering, but we will be watching closely the effectiveness with our sister Committees: the Science and Technology Committee, the Health Committee and so on.

We now need to move on to the main agenda on digital transformation in the NHS. This is an ambitious programme, which is business as usual for

the NHS but not all delivered.

Q31 **James Wild:** Clearly, the NHS long-term plan puts improved digital services at the heart of delivering on that plan, as well as better services for the public. It is going to be a huge process and cultural change. Ms Wilkinson, how far away is the NHS from delivering the Government's ambitions on IT for the NHS?

***Sarah Wilkinson:*** We have made huge progress in the last three years. Within NHS Digital, we have delivered the 111 online system. We have delivered the NHS app and the nhs.uk website which, no doubt, people are familiar with, and multiple other services that were in the original plan, such as the child protection information sharing system and summary care records. The vast majority—about 87%—of prescriptions moving around the system are electronic. All referrals from primary to secondary care are now electronic.

We have also built the cybersecurity operations centre for the system, which has been enhanced significantly since the unfortunate WannaCry incident in 2017. More than anything else, every day we ensure that all of the core national systems are up and running. We have run the most critical of these at 99.99% availability over the last three years. We have delivered and we serve the NHSmail system, which is used by 1.4 million users. It is a very large mail system. We have also deployed NHS Teams, which we rolled out very quickly earlier this year.

On top of all that digital service delivery, NHS Digital is also the national data custodian for the system, so a huge amount of our work is collecting curating, linking, analysing and then disseminating data to a great number of places. We then have a large number of legislative responsibilities around information governance.

A huge amount of progress has been made in the last three years. We are really ambitious about what we can do. We can be more ambitious now than we were in the long-term plan, even though it is a relatively recent document, because during this Covid period we have been able to go even harder and faster, and get more effective data sharing across the system, as well as various other little victories. We can be more confident than we ever have been before about the potential for the digitalisation of this system.

Q32 **James Wild:** Thank you. That is a positive picture. Clearly, one of the big issues in driving this change is the vast number of legacy systems, which could number 100 within a trust area itself. Why is there such a proliferation of these systems and what organisations are you learning from in terms of rationalising them?

***Sarah Wilkinson:*** You are right that there is still a lot of legacy technology and this challenge of mass heterogeneity. There are lots of different technologies, tech stacks and systems in use across the various locales and the regional areas of the NHS. It is complicated to migrate away from legacy systems. We are trying to make sure that we get the right design

architecture into the system, so that the digital capability the national centre provides is as enabling as possible for the regions and allows them to make those migrations.

Q33 **James Wild:** You mentioned WannaCry. Clearly, one of the risks to all Government systems and legacy systems all over the place is the cybersecurity risk. The updates et cetera from Microsoft now all happen, but what specific work have you done to assess the legacy systems and their vulnerability?

***Sarah Wilkinson:*** We work with trusts constantly through a variety of processes to assess the risk profile. We have a questionnaire-type approach that we use with trusts to assess what level of risk they are carrying at any time, and we are focused particularly, of course, on the people at the bottom end of that spectrum. We are acutely aware that there remains significant cyber risk in the system associated with legacy systems. The Microsoft deal that we worked on earlier on this year is enormously helpful to that end, because it allows a lot of migration away from those legacy environments.

Within NHS Digital, we have also put in place a number of national services that regional teams can depend on and will allow them to make the perimeter of their organisations more robust, and various other technical defences that they can tap into that we have provided centrally. It is a long and complicated journey away from legacy, and there is undoubtedly a cyber risk associated with legacy systems. Really, the strategy just has to be to pursue and eradicate them as hard and fast as we can.

Q34 **James Wild:** Mr Williams, what is the impact on patients of the inefficiency of having these legacy systems that cannot talk to each other?

***David Williams:*** As our tech vision sets out, the benefits that we are looking to get from investment in digital transformation are about improving health outcomes and improving patient and staff experience, as well as driving productivity. The challenge here in delivering the transformation programme is about being able to identify and secure those benefits and deliver them on time. I would characterise the legacy landscape as one of the challenges that, collectively, we need to address in delivering those benefits. To the extent that we are off-plan, there is clearly an opportunity cost, which we take seriously through our programme management approaches. It is worth having in mind that some of the benefits here are financial, but they are as much about user experience, patient experience and, in the end, improving health outcomes through the NHS and, indeed, the wider care system.

Q35 **James Wild:** Specifically in terms of electronic patient record systems, on page 44 of the Report, paragraphs 4.11 and 4.12 talk about the different approaches to replacing records, whether enterprise-wide, best of breed or in-house systems. It seems like there is no central steer as to which model trusts should be taking. I would be interested in what work is being done on the in-house design systems, for example. Is that a capability that sits

within NHSX to help drive a commonality of system rather than having a multitude of them?

***Sarah Wilkinson:*** Perhaps it is helpful to clarify for the Committee the different responsibilities of the organisations here. The policy decisions on data and systems sit with NHSX. The responsibility for setting the strategy for digitalisation across the system sits with NHSX. They also define the new digitised services that will be put in place. They set the vision for the new maternity pathway or the new childcare pathway in a post-digitised world. Within NHS Digital, we are at the technical end. We design, build, deploy, operate and manage the security of systems.

The process of setting out the strategy for trusts about how they make their decisions on patient record systems is much more with NHSX than with us. At the moment, there are a number of systems in existence, although some degree of market competition is no bad thing. There remains one system, a legacy from the national programme for IT, that is still run by the national centre, used by about 20 trusts, and NHS Digital still operate that on behalf of the Department of Health.

I will pass over to Matthew to comment on the strategic guidance of trusts in terms of system selection.

***Matthew Gould:*** We would not want to see a monoculture. We tried that in the national programme for IT and it did not work. One of the key lessons from that programme was that you need to tailor technology to the context of the NHS organisation in question. It is correct that we need to provide more guidance for trusts, not just on which electronic patient record to choose but, more generally, about what should be expected of different sorts of providers in health and care in terms of technology and digital transformation. One of the key things we are working on at the moment is a project called "what good looks like", which, as the name suggests, is precisely to set out criteria so that, if you are the chief executive of a mental health trust, an acute trust or part of the health and care system, you know what you need to do to reach a minimal level of digitalisation and digital transformation. That will allow us to create a much more common and sensible approach across the system.

At the same time, we need to make sure that, even if different trusts have different EPRs and different systems, that is within parameters. We are doing two things there that will help. First, we are setting standards, so that, when trusts buy technology, they conform to the same technical and semantic standards, so that, even if they buy two different systems, they can speak to each other. Secondly, we are using procurement frameworks, both to save money using the buying power of the system and to make sure that bits of the system are not making procurement choices in the complete open, but rather from a set of products—whether it is electronic patient records or remote monitoring technology—that is vetted, we know is compliant and we know works.

Q36 **James Wild:** We will come on to standards shortly. I want to pick up on

the lessons learned from the national programme for IT. Mr Williams, the report says that it does not consider that lessons have been properly learned or systematically captured. What are the key lessons from your perspective about the failure of that programme?

***David Williams:*** There have been a range of in-house reviews, lots of NAO and Public Accounts Committee interest, and reviews by the Government's Major Projects Authority. Indeed, as set out on page 12 of the Report, through the Wachter review, there are lessons from a range of programmes that we are adopting well. The two key ones that I would highlight are the previous focus on a centralised national programme as opposed to the approach that we are now taking—and you may comment on this—on setting standards for particular pieces of IT for interoperability, and being smarter about the balance between bounded national programmes where they make most sense and local interventions and activity where that makes sense, moving away from the monolithic, top-down approach.

Flowing from the first point, we have made improvements in procurement and contracting arrangements. We have got more realistic in our understanding of what can best be delivered and over what kind of timeframe. On the one hand, we are ambitious for delivery, given the kinds of benefits that we all see from digital transformation, but that needs to be matched with realism about the differential starting point of individual NHS bodies and some of the challenges of implementation.

Q37 **James Wild:** To pick up on figure 1, point 3 talks about there being no implementation plan yet produced to deliver this programme by 2024. Is there going to be a formal implementation plan? My experience of Government is that things are announced but, for implementation, there is often no plan. That was the mantra of John Manzoni when he was chief executive of the civil service. Is there going to be a formal implementation plan for this programme?

***David Williams:*** Mr Gould may want to come in, but I have a couple of headline points. First, the implementation plan is a blend of what we will be doing nationally, what needs to be done by individual systems and what needs to be done by individual NHS organisations. It is a blended or tiered plan. NHSX set out the first cut of a technology plan to deliver on the vision at the start of the year just before the Covid crisis hit, and development of that plan has necessarily needed to be adjusted to reflect the demands over the last few months. Mr Gould may want to set out next steps there.

***Matthew Gould:*** As Mr Williams said, we had an intention, through the first eight months of this year, to produce a digital strategy for health and care. In February, we put out for consultation the first part of it, which was the vision. It was to be followed by six months of consultations and co-creation between the centre and the front line. Unfortunately, events intervened, but it is still our intention to do that. In the meantime, though, we have the long-term plan and a set of commitments that we need to do our best to deliver.

This will not be delivered primarily at the national level. There are certain services, particularly those built and run by Ms Wilkinson and her team, that make sense to be done nationally. Nationally, we can help the front line. We can give them parameters, support and guidance. Fundamentally, this is about capability, decisions and progress made at the front line, rather than from the centre.

It is not just about the money and not just about what we spend. It is also about systems, guidance, skills and the approach. We are trying very hard to put in place each of those building blocks, so that the front line can drive the digital transformation over the next few years in the way that we want to see.

Q38 **James Wild:** Just out of interest, has any of you spoken directly to Richard Granger about his experiences of trying to roll out the national programme?

***Sarah Wilkinson:*** I have not.

***Matthew Gould:*** I have not, but I have spoken to a number of other veterans of the programme. Indeed, I work with some of them, so those lessons are very keenly learned.

Q39 **James Wild:** Mr Williams, who is ultimately going to be accountable for ensuring that the NHS is digitally transformed? Who is the SRO? Who should we be focusing on in terms of the accountability for this programme?

***David Williams:*** Mr Gould, in his role, as we have touched on already, has responsibility for setting the overall strategy and plan. In that, he reports to the Secretary of State, ultimately. Delivery, given the layered nature of the plan that I touched on, is through a series of SROs for components of the programme and, indeed, through delivery at the local level.

Nationally, in terms of assessing progress against that plan, Mr Gould, working closely with colleagues in NHS Digital, where Sarah Wilkinson's organisation is delivering, has the programme management function. That capability is being built up so that we have the capability of identifying key milestones and metrics and being able to flag where performance is off-track. What action then needs to be taken will depend on whether it is a national or local part of the delivery, and quite what the issue is. You may want to hear more from Mr Gould on the delivery architecture.

Q40 **James Wild:** I appreciate the point that it is a diffuse system that is going to be delivered but who, at the centre, is the controlling mind? Who is the person who is worrying about this every day and the person our Committee will probably want to keep calling back to get regular progress reports? Who is that individual?

***David Williams:*** I suspect it might be all three of us, but if I had to pick one I would pick Mr Gould.

**Chair:** The buck is passed to you, Mr Gould. You are in the hot seat.

***Matthew Gould:*** If it is anyone, it is me, but it is definitely a collaborative effort. As Ms Wilkinson has set out, I am responsible for the strategy. I am formally accountable for it to the Secretary of State, but it is definitely a team sport.

***Sarah Wilkinson:*** NHS Digital feels completely accountable for the effective delivery of everything that we are commissioned to deliver, and I feel completely accountable for that. To deliver effectively, we need really clear views of what the vision for digitisation is, what the strategy is and what the future digitised services will look like. When we get that and it comes down to us to build and deliver, I take full accountability for that.

Q41 **James Wild:** Projects to revolutionise NHS technology have not been hugely successful to date. Mr Williams, there was a target for a paperless NHS by 2018. It has now been moved back to a target six years later to meet a core level of digitalisation, which does not sound as ambitious as some of the other statements that have come out of DH recently. Why has this watered-down target been put in place rather than the paperless commitment?

***David Williams:*** It is a more realistic target. It does not mean that we are less ambitious in where we see the benefits of digital transformation in the NHS. One of the lessons highlighted in the Wachter report is that thinking of implementation in phases, recognising that some NHS organisations are already more digitally mature and that others have a much lower baseline that they are operating from, and having a set of ambitions as well as realistic, phased targets to make and embed progress is a more effective way of delivery in this space.

It also reflects an increased emphasis on the standards point that we have touched on, so the route to delivery is different from our previous ambitions. There is an element of ensuring that the funding is available to match that ambition, although, as Mr Gould has said, this is not simply a question of money but a broader-based change programme overall.

Q42 **James Wild:** Coming to Mr Gould, you have this watered-down target. How much progress has been made to meeting it?

***Matthew Gould:*** I do not think that the target has been watered down. Turning paperless does not describe the range and ambition of what we want to do. For example, one thing we are working on at the moment is scaling up the use of remote monitoring technology, so that people can be monitored out of formal care settings, in their homes or in care homes. That is not about being paperless but it has the potential to transform the way that care is delivered, and to improve and make more efficient and much better for the patient the delivery of care, particularly if they have a long-term condition where remote monitoring can really help. I would not say that we have watered it down. We have sensibly shifted it from being paperless to actual transformation.

How much progress have we made? As Ms Wilkinson has said, we have made considerable progress over the last few years but there is a very long way to go. There is considerable variation in trusts and even more variation in the social care sector. Levelling up both the NHS and the social care sector still has a long way to run.

***Sarah Wilkinson:*** To build on what Matthew just said, I was not around when the word "paperless" was made central to this. It is a bit odd. The benefits of digitalisation are about improving the lives of patients and clinicians. If you look at all the stuff we have achieved over recent years, and particularly the stuff we have achieved in the last six months with Covid, the things that matter are radically improving data access across the system, so that 111, ambulances and pharmacists can see records from primary care; providing great triage tools so that we have 111 online and we can take the load off the 111 phone systems during a crisis; and building much better communication systems like the Teams implementation.

We will achieve massive economies of scale through the digitalisation of prescriptions and referrals, and improved patient security, which we talked about a little earlier, as well as patient access and interaction with the system. The point I would make is that making things paperless does, of course, often make things easier, but it is a slightly peculiar single measure of success.

Q43 **James Wild:** Is anyone able to confirm that there are no longer any fax machines used in the NHS and that they have all gone to a cemetery somewhere?

***Matthew Gould:*** We have taken them off the procurement frameworks. We were going to do a survey of remaining fax machines across the system, but during the pandemic we have been trying very hard not to put any unnecessary or lower-priority burdens on the system. When we think the system has the bandwidth to gather that information, we will ask it to. Anecdotally, it is very clear that there has been a very stark shift.

Q44 **James Wild:** I want to move on to interoperability. Paragraph 14 says that interoperability is essential for the transformation but very challenging to achieve. I want to pick up on a couple of examples. The Report, admittedly using 2017 data, says that "only 15% of trusts reported being mostly compliant with the standard for clinical terminology." Do you have a sense of what that figure is today?

***Sarah Wilkinson:*** It is radically higher. I cannot put my finger on an exact number for you.

Q45 **James Wild:** Is it 80% or 85%?

***Sarah Wilkinson:*** It is closer to that. It is much higher. I am quite happy to drop you a note and outline exactly where we have got to with that.

Q46 **James Wild:** That would be helpful, thank you. On page 46, it talks about

the local health and care record being delivered in waves, to be completed by April 2023. The first wave was launched, but paragraph 4.14 says NHSX has not recruited staff to allow it to do the necessary work. What is the status of that programme now? Do you have the people, Mr Gould?

***Matthew Gould:*** We have been and are recruiting the team to allow us to do that. We have evolved the model, particularly in the light of the pandemic. The local health and care record programme put together bits of the system, typically with populations of 3 million to 5 million, to share records across that population and to develop new pathways to make use of the ability to share them. We have focused it now on making sure that every part of the country has a shared care record in place that will allow patient data to flow safely and appropriately between different care providers, not just in health but also in social care.

We know that it can be done, because it is done very effectively in some parts of the country, but it is even more important now that every part of the country should have that shared care record in place. We are moving as quickly as we can to create a procurement framework so that bits of the country that need to put one in place can buy technology with confidence and produce guidance, so that they know what to do. We have changed the geography of it. Increasingly, the NHS is focusing at a system level: the 44 local care systems as the core unit of geography. Instead of insisting that we have clumps of 3 million to 5 million, we have said that, locally, systems can decide the most appropriate scale to do this on and, if they want to do it at the system level, that is good as well.

Q47 **James Wild:** In terms of standards, the report refers to only three of the 10 sets of standards so far identified by NHS Digital being ready. Why is it taking so long to define these standards? We have been talking about how to do this for about 20 years. Mr Gould, do you lead on the standards?

***Matthew Gould:*** With Ms Wilkinson, we define the standards that need to be met, and NHS Digital will do the delivery of the standards. A lot of progress has been made in defining the core standards, but as important is enforcing the standards and ensuring that they are followed across the system. For example, take the very simple-sounding and existing standard that everyone in the NHS should be identified by their NHS number. It should be one of the big strengths of the system that every individual has a unique NHS number and, across the system, they can be referred to by it.

It sounds straightforward and it has been announced a number of times, but in a lot of trusts it is not the case. It is surprisingly difficult to take a system that identifies all its patients one way and turn it around so that it starts to use the NHS number. There is a lot of work to do to ensure that not just the standards but the underpinning technology, the incentives, the rules and the spend controls are in place, so that the standards embed.

Q48 **James Wild:** It is an agreed Report, so I assume it is accurate that only three of the 10 sets of standards have been produced. When are the other

seven going to be ready, so that people can crack on with the programme that has four years to come to fruition?

***Matthew Gould:*** It was accurate at the time of publication. Across a range of them, we are making progress. The digital medicines programme is now live. Transfers of care for discharge and outpatient letters back to general practice is live in testing. We have now published the national record locator service specs. The events management service is now live. Pathology standards are in progress. We have a unified list for blood sciences, and others to follow. On observation standards, we have version 1 complete and we want to trial it with paediatrics. We are finalising the governance for the UK implementation of what are called FHIR standards. Across a range of the 10, it is not binary and we are making good progress.

**James Wild:** It would be helpful if you could follow up with a note against those 10 sets of standards referred to.

**Chair:** Could you include in that note any upcoming milestones that you are expecting to meet and record where there may have been a knock-on effect of Covid? We are very keen that Covid is not a reason not to do things across Government. Mr Williams shares this view on the money side, so we would be interested to know if there is a knock-on impact and why, specifically, that has been the case.

Q49 **James Wild:** Ms Wilkinson, how are you expecting suppliers to develop these systems to comply with standards when the standards are not ready? How is that going to work?

***Sarah Wilkinson:*** They will not be able to. A lot of standards are ready, as Matthew said. The process of defining standards is a very large problem without very clearly defined edges. Much work has been done to define standards, and NHS Digital has done a lot of work with the supplier community, where those standards are defined, to make sure that they can be implemented. For example, the new procurement framework that we issued at the start of this year for primary care IT system suppliers is much clearer on what is required from a standards perspective in those systems than any framework we have had in the past. The supplier community has, by and large, embraced that journey.

Q50 **James Wild:** Paragraph 15, Mr Gould, says, "NHSX does not have a timeframe for achieving interoperability and its plans are underdeveloped". How long do you expect it to take to achieve interoperability between systems?

***Matthew Gould:*** It is not a straightforward question. You said that individual trusts could have 100 systems that do not speak to each other. I have seen trusts that have closer to 400 systems that do not speak to each other. We have an enormous legacy estate that is extremely complex and distributed. Even if we put in place standards, enforce those standards and ensure that all new bits of the estate are compliant, it will take years for that legacy estate to catch up with the standards. It would be replaced and sorted out bit by bit.

I hope that, in five years' time, we will have a much more interoperable system than we have now. We will, sooner than that, have shared care records across the system to allow data to flow, but true interoperability across the system is a work of years.

Q51 **James Wild:** It is quite difficult for us to hold you to account if there is no target. You said five years for a high level of interoperability. We are looking for more of a metric that you, having been nominated as the person, can be judged against to meet. Can I press you on that?

***Matthew Gould:*** Yes. We can certainly come up with a metric for shared care records and the flow of data. In terms of the impact of the patient and direct care, ensuring that data can flow between care settings, we have said that we want all 44 system to have in place a shared care record by September next year. That will be a stretching target but we will do our best to give systems the support that they need to reach that. That would be the key target.

I do not want to put a timescale on deeper interoperability and getting away from the legacy estate and extraordinarily patchwork system that we start with, because it is complex and hard to pin down as a job.

Q52 **James Wild:** On interoperability, I want to pick up on the opportunities of the cloud and cloud computing, and a particular opportunity around vendor-neutral digital image sharing, where there would be big benefits for patients, radiologists and consultants. How can NHSX ensure that that opportunity to use technology, so that you can get images to where there is capacity to tackle screening delays, is taken up by trusts?

***Matthew Gould:*** There are numerous ways. First, we can put in place and ensure that the policy and standards facilitate the use of cloud and the ability to share images in the way that you described. Often, they were written pre-cloud and need to be brought up to date, and we need to make it easy for bits of the system to move to that technology. Secondly, Sarah's team has done outstanding work in ensuring that the connectivity and bandwidth are in place for this to work. These are heavy bits of imagery to move around, so we need to make sure that the bandwidth allows that.

Importantly, we can make sure that the care pathways make use of the technology, so that, when we design or redesign a care pathway, it takes account of the opportunity, as you have described, to use technology to provide a more efficient service and create better outcomes. There is a range of ways that we can do it.

Q53 **James Wild:** I have a constituent who is involved in a company that does this widely across the independent sector. Ironically, he is doing it across the independent sector where the NHS has been paying. He does it with some trusts but he is having real problems with getting traction. They have had some conversations with people within your organisation who are favourable, but this opportunity just seems to melt away. I would be grateful if, perhaps offline, we could have a separate conversation about

how standards can be used to make sure, not for my constituent's company but across the board, that this technology can be used. The way that it has been operating during Covid has been successful and we can do more on that, if you are amenable to that, Mr Gould.

***Matthew Gould:*** I would be very happy to.

**Chair:** Mr Gould, as the MP for Shoreditch, I will put in a plea there. A similar business to Mr Wild's struggles to understand how to get into the system and work out how it can get on the platform.

Q54 **James Wild:** There is clearly a tension here, Ms Wilkinson, in the legacy systems between getting interoperability and the aim of increasing the suppliers into the system. How is that tension going to be managed so that we avoid some of the problems that you are now having to deal with, while opening up the system to new and innovative companies?

***Sarah Wilkinson:*** Moving to open interoperability standards will free the market up. If we are very clear about how we expect vendors to provide interfaces into their systems, it is easier for other vendors to develop services, to enter the market and to interconnect with their systems. One thing that makes it very difficult, as you alluded to earlier, for new providers to come into this market is the complex work of integrating with a large number of other systems in the health environment, some of which are not hugely interoperable. Interoperability is an absolutely critical foundation condition for creating a vibrant, competitive market for healthcare technology.

The legacy systems are difficult to migrate to modern international standards. There is no question about that but, as I said earlier, there is no easy answer for managing legacy. You just have to have a clear plan for getting off each legacy environment, and you have to keep going until it is done.

Q55 **James Wild:** Local organisations are being asked to build a data layer. My understanding from the report is that the work has not been done yet to define what is needed for that to be successful. Is that correct?

***Matthew Gould:*** It finds expression in the shared care record programme that I described earlier, where we want to make sure, as I said, that each of the 44 systems has in place a shared care record so that patient data can flow. We are defining standards, creating a procurement framework and providing a measure of funding and support, so that that can be put in place very swiftly.

**Chair:** We have had a really interesting part of the session, but we do need to keep an eye on time and keep answers a bit shorter. Olivia Blake will set the example with some very pithy questions.

Q56 **Olivia Blake:** Yes, Chair, let us try to keep this to a quick-fire round. This first question is to all three of you. How is the relationship between NHSX, NHS England and Improvement and NHS Digital functioning?

***Matthew Gould:*** It is a work in progress, but it is getting better all the time. We have learned that we need to have clarity of roles between NHSX and NHS Digital. As Sarah has described, we are getting there and it is getting better and better. We have also learned that it is really important to embed a digital transformation mindset in NHS England and Improvement, so that it is not just tech people talking to tech people, but tech is properly embedded, whether it is on the clinical, transformation or people side.

One of my functions is to be NHS England and Improvement's national director for digital transformation. It is an absolutely core part of the role of NHSX to ensure that it is NHSE&I's digital transformation directorate, and we have digital transformation really firmly helping to drive what NHS England does.

***Sarah Wilkinson:*** I completely agree with Matthew that it is a work in progress. It is very complicated to insert a new organisation into a structure that is already very complicated. NHSX has an interface upstream with NHSE&I and downstream with NHS Digital, so getting all of that right is not dead straightforward. Matthew and I put a lot of work in during autumn and winter on working out what the boundaries should be between the roles of the different organisations, and documenting and socialising that. We are both in agreement and very committed to making that work this year.

The honest truth is that, in the last six months, we have not looked up, having been so consumed in NHS Digital with building services specific to Covid. We have had very little time to spend looking at rationalising the organisational design and eradicating some of the overlaps that have emerged between X and D. But we are all committed to a direction. As Matthew said, it is a work in progress at the moment.

Q57 **Olivia Blake:** Have there been any unforeseen difficulties in the relationships?

***Matthew Gould:*** In individual projects—

**Chair:** We will go with Ms Wilkinson, because NHS Digital was there before you, Mr Gould. We will do it in that order.

***Sarah Wilkinson:*** As I said, inserting a new organisation into a construct that is already very complicated is not a straightforward process. Of course, there are still tensions in the model and there are still things that we need to iron out, but we are completely committed to where we need to get on this, and we have started on that journey.

***Matthew Gould:*** I agree with Sarah.

Q58 **Chair:** You agree, but you were saying that there are some tensions. Perhaps you could both give us a couple of examples of the tensions and how you are trying to resolve them.

***Sarah Wilkinson:*** They are just overlaps at the moment in terms of work that is being done. We will refine that and get to a position where there are fewer people in both organisations trying to act in the same space, which becomes inefficient and decisions are made less quickly. It is relatively nascent as a structure and it is very complicated to put something new into this structure. Had Covid not happened, we might be sitting in front of you saying that it works quite smoothly. We really have not made much progress in the last six months, but for understandable reasons, and we just need, at some point, to get back to refining the two models and ironing out the problems that exist today.

***Matthew Gould:*** As Sarah said, we are, bit by bit, clarifying who does what. If you take an area like architecture, for example, it is very clear that Sarah and her team lead on the technical architecture. My team will lead on the enterprise architecture and how the bit that Sarah builds fits into the whole. What had been a bit messy has become increasingly clarified. As Sarah said, we are making progress on defining where D stops and X starts, and vice versa.

**Chair:** There is a phrase there about D stopping and X starting that I am sure we can play into our report.

Q59 **Olivia Blake:** In response to that, how long do you think it will take, given the current circumstances, for you to get to that point?

***Sarah Wilkinson:*** To be perfectly honest with you, when we started our Covid programme and we had a whole bunch of things we had to do in the first part of this year—the 111 platforms and data to research, as well as the new remote access architectures and building the infrastructure for test and trace—I thought that that would be a huge chunk of work in the first half of the year and slightly lighter in the second half of the year. That, unfortunately, was very wishful thinking and we now have a massive agenda to the end of the year, because we are working on the vaccinations platform, the risk stratification for vulnerable people, ongoing remote care and re-plumbing 111 to allow for booking into an emergency setting.

There is a massive body of work and I really have to keep everybody in my organisation focused on that. That is what matters, really to resolve organisational and operating model issues. Laura Wade-Gery is doing a review over the course of the next few months, looking at the ambition for digitalisation in the health service. As part of that, she is looking at operating models. That will help and give us an independent perspective, but refining organisational model nuances is not my highest priority right now.

***Matthew Gould:*** I agree with Sarah. There is an awful lot to do at the moment. Laura Wade-Gery's review will give this process the boot. Crucially, as you alluded to in the original question, it is not just or even primarily about X and D. It is about the whole system and ensuring that digital transformation is in the whole. The Wade-Gery review is emphatically looking at the role of E&I and how we can make sure that,

whatever bit of the centre thinks about a problem—a new approach to cancer or whatever—the opportunity of digital technology is inserted from the start rather than tacked on as an afterthought.

Q60 **Olivia Blake:** Mr Williams, why did the Department feel it necessary to introduce NHSX? Do you think we have a bit of an overcomplicated system at the moment and how would you justify that?

***David Williams:*** From a departmental perspective, the establishment of NHSX is a helpful clarification at the national level about responsibilities for strategy, for the vision and for the overall direction, rather than having that strategic-customer function split between the Department and NHS England and Improvement. Having a single voice reporting to the NHS England and Improvement board, and into the Department and the Secretary of State, on the tech vision and what good looks like has been a really quite helpful decluttering of the landscape.

It also means that, within the Department, where, previously, the tech portfolio for our own interests was at director or deputy director level, we have, through Mr Gould's joint appointment, a senior civil servant. He sits on our departmental board, in effect, as the departmental CIO, which gives us a more senior focus for these issues within the Department that would otherwise be harder to sustain.

It is primarily around clarity on strategy and ownership, and embedding some of that in the wider thinking and work of NHS England, as Mr Gould has said, while, at the same time, allowing us within the Department to up our own game.

Q61 **Olivia Blake:** We have heard about duplication. Why do you feel that NHS Digital was unable to fulfil the roles that you have just outlined?

***David Williams:*** It is about the distinction between a strategic client setting direction and setting the requirements, and the critical role that Sarah Wilkinson's organisation plays as a technology supplier and implementer. It is a different function.

Q62 **Olivia Blake:** You have touched on this, but can I ask a bit more about how you feel the lines of communication and responsibility are functioning and whether they are adequate for the size of this project?

***David Williams:*** Picking up on the points that Mr Gould and Sarah Wilkinson have made, there are still aspects of the organisational structure and the boundaries between organisations here that are a work in progress. Some of that will absolutely be in scope for the review that Laura Wade-Gery is conducting. She will present her findings and, no doubt, recommendations to the Secretary of State later in the year. As Sarah in particular said—and I absolutely agree—there is plenty to get on with in the meantime. Under her leadership and Matthew Gould's leadership, both organisations are focused on practical implementation and delivery rather than the border skirmishes, as it were.

Q63 **Olivia Blake:** We have not touched on this before, but do Mr Gould and Ms Wilkinson feel that there is any tension between the Department and their two organisations?

***Matthew Gould:*** It is functioning broadly smoothly. That is not to say that there are not issues or discussions, but I am happy with how it is working. The creation of NHSX has, as Mr Williams said, given a measure of unity to the strategy and the direction. We are still developing how we use that. It is functioning broadly well and getting better and better.

***Sarah Wilkinson:*** NHS Digital enjoys a very positive relationship with the Department.

Q64 **Chair:** Is there anything that you would like to see improved? There must be practical day-to-day tensions.

***Sarah Wilkinson:*** They could always provide us with more funds.

Q65 **Chair:** There is your bid. Mr Williams, you have all that money sloshing around for Moonshot. You could perhaps give a bit to Ms Wilkinson.

***Matthew Gould:*** As Sarah said earlier, we need to do a better job of ensuring that, when we ask NHS Digital to build and run things, there is real clarity and unity around what is required. We are strengthening, for example, our approach to SROs. We are putting in place a strategy to ensure that we grow the cadre of SROs with the training and capability we need. We are strengthening our project management office to make sure that we track, monitor and run projects most effectively, so Sarah can have the clarity of purpose that, as a delivery organisation, she needs.

Q66 **Chair:** Going back to Ms Wilkinson, you said more money as a throwaway remark, but what would you spend that money on? To be really clear, what you would like to be able to do that you cannot do at the moment?

***Sarah Wilkinson:*** To build on Matthew's point, the single biggest critical success factor for us is clarity of commission. Where we run into difficulties on projects is in getting absolute clarity from commissioners, whether that was NHSE prior to NHSX, or NHSX, or the other ALBs we support. Our job is to codify things, but you cannot codify things that are conceptual. People need to be very specific. Redesigning complex pathways in the health and care system to digitise them is a really tricky business that requires a huge community of people to be brought together, which Matthew is quite extraordinary at. We need to get that clarity, which allows us then to get clear instructions and to crack on with the build.

In terms of what we would spend it on, we are a commissioned organisation. It is up to Matthew to determine what the priorities are for digitalisation, and we will build according to the priorities that are set by NHSX. We would love to have more money to spend on the digitalisation of social care, and to enhance some of the interoperability agendas and move away more quickly from the legacy systems, but there is not an

infinite amount of money for technology. That complex problem of prioritising what matters most sits with Matthew, thankfully, not me.

Q67 **Olivia Blake:** Moving back to Mr Williams, we have established who has responsibility for the project, but how is the Department tracking delivery of NHSX, given that it is an unaudited body? What is the Department doing to make sure that money is being well used?

***David Williams:*** The national spend that Mr Gould has at his disposal either turns out to be departmental funds, particularly on the capital side, in which case the normal departmental processes for resource allocation and monitoring of spend apply, or falls to NHS England and is overseen by Julian Kelly in his role as chief financial officer for that organisation.

It is an area that we should keep under review. We are looking in terms of resource allocation to empower Mr Gould and his organisation to prioritise within a budget. He has touched on programme management and development of SROs so that we can have delivery aligned to the way in which money is spent. For practical day-to-day purposes, responsibility sits in NHSX, but, in terms of the auditing point, it comes either through NHS England's accounts and then into mine, or directly into the group provision.

Q68 **Olivia Blake:** Do you think that more needs to be done to be able to hold both NHS Digital and NHSX to account from your Department?

***David Williams:*** Just building on your finance point, the budgetary arrangements for digital transformation are not straightforward. It is in the nature of tech spend that some of it is revenue and some is capital, and those are different budgets in terms of how the Treasury and Parliament vote resources to the Department. Balancing between national and local spend is quite a complex process, so continuing in the direction of travel in which there is a tech envelope within which NHSX can prioritise and commission, and setting clear budgets for NHS Digital in which Sarah Wilkinson's organisation can deliver, is part of that continuous improvement of the relationship.

Q69 **Olivia Blake:** I understand that it is not established by statute. Where, therefore, does responsibility lie, if something was to go wrong?

**Chair:** Mr Williams, you are the accounting officer for NHSX, effectively, in all reality.

***David Williams:*** The money that Matthew spends splits partly between money for which I am directly accounting officer and money that is spent by NHS England, for which Simon Stevens is the accounting officer, although his position consolidates into the group space. Matthew's joint appointment discharges a range of departmental and NHSE functions, which are distinct, but through a single appointment and a single team. In that sense, the relative letters of delegation and accountability are set out. Getting the money tidied up so that he has more authority and, with that, some accountability for how prioritisation decisions are made may be

worthwhile. In practice, it is working okay. It is getting better with practice. It is not the most important thing that I would want to spend time—

**Chair:** This Committee, as you know, likes to know that we can follow the money through, so we will keep an eye on this one.

Q70 **Olivia Blake:** Moving on to the communication and work between the local areas and the national programme, you mentioned procurement and standards. Who is responsible for the sign-off at a local level, and what oversight do you have of this nationally?

***Matthew Gould:*** Typically, it would be the chief executive of the organisation in question. A mental health trust chief executive would be ultimately accountable for the purchase of, for example, a new electronic patient record system. There is a business case approvals process in place for spend above a certain level.

We are putting in place a spend control system to make sure that the spend is compliant with the standards we set out. We have been putting in place a series of procurement frameworks, so that it can be done more quickly, more easily and more confidently, and putting in place a variety of programs to train staff, so that they can have confidence to engage with this process more than they do at the moment. It is a local accountability that sits ultimately with the chief executive of the organisation, but we are keen to support them so that they can make better choices with more confidence.

Q71 **Olivia Blake:** Following on from that, Mr Gould, what levers do you currently have over STPs or ICSs as they consider technology investment? Are there any circumstances where you would be allowed to intervene in local systems to advise anything that was out of step with the national strategies?

***Matthew Gould:*** This goes to the point around why we need to have that join-up between the central organisations right, and particularly, in this case, NHS England and Improvement. The phase 3 letter that Simon Stevens and Amanda Pritchard sent out to the system included in it a set of requirements on data sharing. That was an example of using the levers inside NHS England and Improvement to set out requirements to drive change. For me, it is a model of how we want to do it.

In terms of how we would intervene or stop, as I said, there is a business case approvals process for particularly large tech projects, but we are keen to put in place a more nimble spend controls process for much more of the tech spend that will allow us both to support and to ensure compliance of tech spend by systems and providers.

Q72 **Olivia Blake:** Building on that, you mentioned earlier that you do not want to be monolithic but also that you are going to have frameworks. What if your frameworks do not meet the clinical need? How many different frameworks do you imagine there being for different care settings?

***Matthew Gould:*** If they do not meet the clinical need, they will have failed. One of the core lessons of the national programme and then the Wachter review is clinical engagement. From everything I have seen, one of the core criteria for success is clinical involvement. For example, we are in the process of building a procurement framework for remote monitoring technology that we are about to launch, which will bring procurement of those bits of technology down from three months to three weeks. Systems and providers will be able to buy it with a lot more confidence than they can at the moment. That has emphatically been done with clinical colleagues and with a clinical lead. Again, this will not work if tech is in a silo. It will work only if clinicians drive the need and help us get the standards and procurement frameworks right.

In answer to your question about how many, there is a danger of proliferation of frameworks. If there are too many, it can be a bit bewildering when you are sat at the front line, wondering what to buy. We have set up a strategic commercial function in NHSX, with a brilliant commercial director who is ploughing through the landscape to try to work out, with colleagues in NHS Digital, NHSE&I and the Department, how we can make sure that the system is optimal, and that we have the right frameworks and the right number of frameworks.

Q73 **Olivia Blake:** Does the funding currently back people who are good at writing procurement strategies and business cases, and is it leaving behind some trusts that are weaker in that skillset? It seems like the approvals process might be leaving some trusts behind, from what I can see. Can you confirm the way that you work differently with different trusts at different levels, because some are very far ahead and some very far behind?

***Matthew Gould:*** There is always that danger that some trusts become very expert at seeing opportunities for funding and grabbing them with brilliant business cases, and those that might need more help do not have that skill and capacity. What are we doing about it? There are two main shifts. First, we are trying to make the paperwork proportionate. In the global digital exemplar programme, we have moved from supporting the most digitally mature trusts to those that are less digitally mature but want to raise their standards. We have brought down the agreement letter from over 100 pages to more like 10 pages, so that it is more manageable and, if you are at the front line, you are not drowned in requirements, paperwork and process. You need that bandwidth to be focusing on the delivery, with the right level of assurance in place.

As I mentioned, we are moving the focus of the effort from helping those who are already good to get better, which we have done with real impact with the global digital exemplar programme, to helping the rest catch up and a levelling up agenda, which is the next chapter of provider digitisation.

Q74 **Olivia Blake:** Do you feel that your three organisations are nimble enough to react quickly to new products, particularly around new care pathways?

***Sarah Wilkinson:*** I would have worried more about that pre-Covid, but we have taken on large numbers of completely new and significant elements in our tech stack in the last six months. We have done it quickly and efficiently, with all the right results. We have learned what we can do. We are massively more confident coming out of it than we were going in. We are nimble. I know that that has been a fear of people looking at the system from the outside, but we know now that we can adapt very quickly to new technologies.

***Matthew Gould:*** I agree with that. Covid has shown what we can do. In a few weeks, for example, we put together the NHS data store to give the NHS much better and more granular detail on where there were needs in the system.

Q75 **Chair:** The key thing is that you have learned lessons. I am aware of time and we need to move on. Mr Williams, you were nodding, so presumably you agree.

***David Williams:*** I agree.

Q76 **Chair:** Thank you. We need to move on now to the money, Mr Williams. I am going to focus on you, if that is okay—well, it is your job. Is the £8.1 billion set aside between now and 2023-24 enough for the Department to achieve its ambitions? Is it going to make it work?

***David Williams:*** I think so. It is more than we have previously allocated. It will allow us to make good progress. It is in the nature of a portfolio like this that some things will turn out to be easier than you expect and others will be harder.

I would caution against seeing this as being a point at which the shutters come down. Investment in technology and in digital capabilities is going to be an enduring feature of life in the NHS, and the trick for us is to carve out a sustainable pipeline over the medium term.

Q77 **Chair:** Those sound like great words and we all agree with the sentiment, but you have underinvested in the past, so how can you convince us that you have it in the right ballpark? All this digital transformation was already being planned and, in the light of a post-Covid world, we are going to be doing things more digitally generally as well. Are you confident that this is enough?

***David Williams:*** The money set out in the Report is the money that we have allocated. There is a spending review this autumn, which will confirm some of those assumptions that we have made one way or the other.

Q78 **Chair:** You talked about the spending review. Is this ring-fenced money in any way? You have had a lot from Covid. We know that the Treasury always gets jumpy about Departments spending money and they will be looking very closely at your spending. Is there any danger that the Treasury will make you raid this budget to backfill some of the Covid spending?

***David Williams:*** Generally speaking, the approach that we take with the Treasury is that it meets the net additional costs of Covid through additional resources over and above our baseline budget.

**Chair:** It does at the moment.

***David Williams:*** So I am not particularly expecting pressure here as a result of that. The resource elements of the programme funded by the NHS are part of the long-term plan funding settlement for the NHS that has already been agreed. The particular piece that we need to settle this autumn is the capital component. Bits of it are more locked in than others.

On your Covid point, although there will be disruption to some plans as a result of Covid, as I hope you will have taken from the evidence from Mr Gould and Sarah Wilkinson already, there have, nevertheless, been lots of things that we have been able to advance in terms of remote technology, digital consultations and so on. Digital capability has been at the heart of the NHS's response to Covid, so there are things there that we can build on and bank as we look to the programme going forward.

Q79 **Chair:** You touched on capital and on resource. A major part of the resource is from trusts directly. As well as that £8.1 billion, there is an extra £3 billion expected to be contributed by trusts. We know how squeezed they have been and let us not rehearse the arguments about the capital funding in that sector. How will they afford this? It is in the plan but is it really there? Crucially, is it ring-fenced for this? Is there any ring-fenced money in the NHS plan?

***David Williams:*** It is not specifically ring-fenced. From trusts, it is more likely to be matched funding through resource spend rather than capital specifically. Roughly half of what we spend on tech is resource rather than capital. As trusts return to financial stability, they will have more headroom to invest in this area. As you know from previous hearings, trusts have a range of financial challenges, with some doing better than others, in the same way as some trusts are more digitally mature than others.

Q80 **Chair:** Indeed. My own hospital—Homerton—is right at the cutting edge of digital, and the neighbouring trust down the road—Barts and The London—is still very proud of its paper records. It is quite extraordinary. I make my local point there.

You were talking about the range of financial situations in trusts. We know that the top 10 are in a really difficult state. Even with the write-off of their debts earlier this year, they are still going to have that structural problem, so are you going to be doing anything to particularly help those on digital? It is a pretty important, pivotal pillar of future NHS work, as you have just described, particularly as Covid has thrown up.

***David Williams:*** We are currently in discussion with colleagues in NHSE around the financial framework for next year and beyond. As you will appreciate, with Covid we have moved to a different financial structure for trusts this year, just to reflect the need to deal with a range of unplanned

pressures. The availability of trust funding, ideally on a match-funded basis, is part of the refinement and finalisation of plans that we need to do post-spending review. It is not just about money. You need the availability of the money. It is about trusts understanding what good looks like and having the leadership, buy-in and bandwidth to deliver.

Q81 **Chair:** I am going to bring in Mr Gould on that. As well as an understanding by trusts, one of the other issues is digital skills in the NHS workforce. Could you touch on the point that we were just discussing, and whether there are going to be enough skills in the future and how you can help backfill that from NHSX?

***Matthew Gould:*** To start with the point about trusts funding digitisation, one issue that has inhibited this in the past has been a lack of clarity around what trusts are expected to pay and what comes out of the centre. One of the most useful things we can do is a project we are imaginatively calling "who pays for what", which will set out what it is the responsibility of providers to pay for and what they can legitimately look to the centre for. What has happened in the past is providers with finite resources hoping that the centre will come up with a pot of cash for digital, which will save them from having to do it, and, as a consequence, not investing the money that we would have liked them to. Clarity on that will definitely help.

On skills, this is as much as or more about people than the technology, and we are ramping up our spend on the digital ready workforce programme, with a real focus on, first, training up and giving confidence to chief executives, boards and the leadership, so that this is owned at the leadership level, where it needs to be; and secondly, the professions—the chief information officer cadre and the chief clinical information officer cadre—so that they get the training, support and approbation that they deserve and we can turn them into real professions where their skills are valued as, for example, clinical people.

Q82 **Chair:** This is all good stuff, but we talk about this all the time. In every Department we talk to and every sector we look at, there is a huge shortage of digital skills. We have the whole risk of cyberattacks. Practically, how are you going to make sure that the NHS as a whole has the right people? For all those people out there who are losing their jobs, are there opportunities here for people to be trained up? Some of these jobs take quite some time and are quite specialist. You talked the talk there, but how are you going to get the bodies on the ground to do this work?

***Matthew Gould:*** In terms of figures, in 2019-20 we put £3.5 million into the training element of the digital portfolio. This year, we have well over doubled that to £9 million, so we are ramping up and I expect to ramp up still further. We should absolutely be creating pathways for people to be able to come in, to train up and to be part of this. As you said, it is not a short process but, if we can put these elements in place—the professional pathways, the training and the buy-in from leadership—that is much more likely to happen than just a central diktat.

Q83 **Chair:** What about at the cyber end? There is a real risk with all these new systems. How are you going to make sure that they are secure enough at the design and that you also have the top cyber people, for whom there is enormous competition across sectors and, indeed, worldwide, to grab them and their skills?

***Matthew Gould:*** If I go first and then pass over to Sarah, we need to, first of all, work out what cyber skills we need and where. At the trust level, you need to know that each trust is doing the basics, keeping its cyber hygiene correct and fulfilling the core things that you want at that level. You then need to create national capability, both inside NHS Digital, which Sarah has done brilliantly, and drawing on the national capability in the National Cyber Security Centre, so that the top-end expertise has line of sight to and can be drawn on at the local level. Knowing what you do at which level will be key, rather than trying to turn every acute trust into a cybersecurity hothouse.

***Sarah Wilkinson:*** I would agree with that. Cyber is one area where we desperately need skills but it is by no means radically harder than some of the other areas. We have the problem that salaries for highly skilled digital staff have typically been much higher in the private sector. I would just take a minute to say that the opportunities we have now in the NHS to do extraordinary digital work are higher than they have ever been. I very much hope—and I am already seeing it—that people in the private sector see this as the moment in time to move into the NHS and bring their skills with them. We proved this year what an extraordinary institution it is, and we now need all those digital skills behind us to digitalise it.

Q84 **Chair:** We have looked at the WannaCry attack and there are cyber plans in place, but can we just be clear: are you confident that each trust has its own proper digital plan, not just a cyber plan, especially bearing in mind what Ms Wilkinson said about how Covid has moved things on so quickly?

***Sarah Wilkinson:*** As I said earlier, we are tracking the risk profile of each trust. Cybersecurity is the responsibility of the local trusts, but we want to lean in and be as helpful and as facilitative as possible.

Q85 **Chair:** Are you confident that they all have a clear plan now? Who monitors that? Which of you is responsible for watching that they have a proper cyber plan?

***Sarah Wilkinson:*** The trusts are responsible for their own fortune, so to speak, but we do monitor that. We engage heavily and provide additional national services. Where anybody reaches out to us to say they need additional help, we always find a way to give that.

**Chair:** We probably need to go further into that at another hearing.

***Matthew Gould:*** Something that gives us confidence is that we have rolled out—and Sarah and her team have done a brilliant job of this—advanced threat protection across 97% of the digital estate, which means

that we have live visibility of, for example, patches being done at the front line and so forth.

Q86 **Chair:** The live visibility is a central oversight. That is really helpful to know. Thank you very much for that. My last question is to Mr Gould, on the costs and benefits of the options for electronic patient records. The Report is quite clear that you do not really have a good grasp of the potential long-term cost benefits. That is one of the critical ways of selling this to trusts. Why do you not have that data? Are you planning to do an exercise to look at that, so that we see what the long-term potential savings are?

***Matthew Gould:*** We are not just planning but we are doing it. I have set up a strategic commercial function. We have this project of what good looks like, so we can set criteria, and we will absolutely underpin this with our best understanding of different products and approaches to the costs and benefits of each.

Q87 **Chair:** You are doing it, so when will we have some figures? When can you write to us with the information about when we will have a proper understanding of the costs and benefits of this major change?

***Matthew Gould:*** On the electronic patient records in particular, I would hope that, within six months, we can give you at least a first cut of our understanding of the costs and benefits of different approaches. We are working on the commercial strategy for that now.

Q88 **Chair:** You will, no doubt, be engaging with those frontline users in hospitals, GPs and so on, not just on the cost benefit, but to make sure that they are bought into it. We have seen problems with GPs not being convinced of things like choose and book in the past. Part of that will be engaging with the front line.

***Matthew Gould:*** Absolutely, our whole job is about engagement with the front line. There is a very low limit to what we can do sat in the centre. The success or failure of this rests entirely on the front line.

**Chair:** In other times, we would have had a pre-panel set of witnesses from the front line. Unfortunately, the restrictions make it a little more difficult, although we are ambitious to go back to our normal ways of working.

Q89 **Olivia Blake:** Following up on one of Meg's earlier questions, has anyone done any assessment of the long-term financial difficulties, and productivity and tech capabilities, of these struggling trusts, and whether the funding structure is a structural issue compounding the issue?

***David Williams:*** As part of the long-term plan and the commitment to return the provider sector to financial balance, NHSE&I has a plan for engagement with the most financially challenged trusts. As you say, in some cases there are structural issues sometimes related to previous private finance deals and sometimes related to the local health economy, not all of which are within the easy management gift of the leadership of

the individual organisation, so the recovery plans and financial trajectories take that differentiation into account.

**Chair:** We will leave it there for now. We would love to continue this but we will be coming back and looking at this again. On behalf of the Committee, can I pass on my thanks to all of you for your contributions to tackling Covid? We are here to scrutinise and, if necessary, criticise Government failure but, where you have been putting in the work, we do recognise that, and I would like you to take that back to the Department, if you could, Mr Williams. We do appreciate that civil servants and others at the front line have been putting in a lot of work to support us all. Very best of luck as we see this surge in cases, which is, no doubt, going to keep you all very busy.