



Public Accounts Committee

Oral evidence: The Defence Digital Strategy, HC 727

Monday 14 November 2022

Ordered by the House of Commons to be published on 14 November 2022.

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Members present: Dame Meg Hillier (Chair); Sir Geoffrey Clifton-Brown; Mr Jonathan Djanogly; Anne Marie Morris; Nick Smith.

Gareth Davies, Comptroller and Auditor General, Adrian Jenner, Director of Parliamentary Relations, National Audit Office, Tom McDonald, Director, NAO, and Marius Gallaher, Alternate Treasury Officer of Accounts, were in attendance.

Questions 1 - 98

Witnesses

I: David Williams CB, Permanent Secretary, Ministry of Defence; Laurence Lee CMG, Second Permanent Secretary, MoD; Charlie Forte, Chief Information Officer, MoD; Lieutenant General Tom Copinger-Symes CBE, Deputy Commander, UK Strategic Command.



Report by the Comptroller and Auditor General
The Digital Strategy for Defence: A review of early
implementation (HC 797)

Examination of witnesses

Witnesses: David Williams, Laurence Lee, Charlie Forte and Lieutenant General Tom Copinger-Symes.

Chair: Welcome to the Public Accounts Committee on Monday 14 November 2022. Today we have officials in front of us from the Ministry of Defence, because the Ministry of Defence, as well as its physical estate, has a digital estate. The digital estate is largely reliant, as are many systems across Government, on outdated legacy systems. The good news is that the Ministry of Defence has a plan, the defence digital strategy, but there are a lot of challenging moving parts to this, not least because of the security arrangements necessary for these systems to work, and the different levels of security clearance that they have to go through, the interoperability between different branches of the armed forces and our allies, and the genuinely unique nature of much of the work of the MoD. Clearly, in the world of cybersecurity, this is also increasingly an important issue.

I would like to welcome our witnesses today. We have, of course, David Williams, the Permanent Secretary at the Ministry of Defence. We have Laurence Lee, the Second Permanent Secretary at the Ministry of Defence; it is your first time in front of us, so welcome to you. We have Charlie Forte, the Chief Information Officer at the Ministry of Defence. We very much like chief information officers, Mr Forte, so I hope you do not let us down, because we see you as vital to the future of how Whitehall deals with these issues, in general and of course in the case of the Ministry of Defence. I am delighted to welcome General Tom Copinger-Symes, who is the Deputy Commander of UK Strategic Command. Thank you very much indeed.

Before we kick off on the main issue of digital, I want to thank you, Mr Williams, for your letter of 6 September, following our hearing in June and then a letter from me in July. I wanted to ask Sir Geoffrey Clifton-Brown to pick up on a point in that letter.

Sir Geoffrey Clifton-Brown: Good afternoon, Mr Williams. Thank you for your letter of 22 September.

Chair: It was 6 September.



Q1 Sir Geoffrey Clifton-Brown: This is from General Dynamics. This is in relation to Ajax, and I declare that I have had a briefing from General Dynamics. It tells me—perhaps you can confirm or otherwise—that Friday

a week ago was crunch day; the Army was doing its tests to find out whether the noise and vibration problems had been solved. Is that correct or not?

David Williams: The Ajax vehicle has now successfully completed the UVT—user validation trials—phase. It was around two weeks' worth of trials, including a range of variants, within the Ajax armoured vehicle family. Based on the initial reports from those two weeks of trials, we think we have a workable technical solution to the noise and vibration issues that the vehicles had. As you will understand, we are just working through the detailed data from those trials now, while beginning preparations for the next phase of the programme, which is commencement of the reliability and growth trials.

Q2 Sir Geoffrey Clifton-Brown: Given that the solutions were pretty low-tech—a little bit of anti-vibration material in the floor and in the levers either side; a double-skinned ear protector rather than a single one—why has it taken over a year, on a contract of this complexity, importance and amount of money, to achieve those relatively low-tech solutions?

David Williams: The solutions that we have trialled are relatively low-tech, as you say. First, in a programme of this importance and complexity, we have been keen to ensure that we have the right solution. Secondly, as you know, we take very seriously the safety of our armed forces personnel and have been very keen, through the safety cases, to ensure that there is not a repeat of potential harm to crew using the vehicle in trials. There has been a range of contractual and commercial issues to work through with GD as well.

There has been a degree of keenness for the UVT phase—those user validation trials—to begin as soon as possible, but this autumn turns out to be the earliest we have comfortably been able to do it. I hope now that we will be able to progress into reliability and growth trials quite quickly, while taking forward the necessary work to review the underlying contract and reset key dates for the programme.

Q3 Sir Geoffrey Clifton-Brown: Having been given the briefing, I am convinced that this is a step change in ground vehicles for the Army. It really is, but it will be limited in its technical capabilities until you can get the Morpheus system put in place. We will talk about the digital communications of Morpheus a little later on. Can you give the Committee any update as to when Morpheus is likely to be fitted to it?

David Williams: On Morpheus, it is important to recognise that a range of sub-projects within the overall LE TacCIS—the land environment tactical communications programme—have either delivered or are on track. The Morpheus element is about evolving to an open architecture to allow us to



develop the Bowman system in future without being linked to the single OEM, the original equipment manufacturer. The timescales for fixing Morpheus do not impinge on our ability to get Ajax into service. It is about how we can grow that communications capability over time. Mr Forte may want to add detail on Morpheus specifically.

Q4 **Sir Geoffrey Clifton-Brown:** You will be able to operate the existing Bowman system for the time being, and it will be enhanced by Morpheus. Is that the case?

Charlie Forte: Yes, exactly. We will continue to integrate the Bowman system. Actually, it was always the plan for some time to come yet. The aim of Morpheus and, in particular, a bit at the centre called Evolve to Open, was about allowing us to put a wide variety of capability available in the marketplace, as well as things that we would grow and develop ourselves, into the hands of the front line in a deployed space.

There have been particular problems with one component of Morpheus in the Evolve to Open space, and I can talk about what some of those problems are. It is important to note that, through the LE TacCIS programme, and indeed Morpheus, we are continuing to deploy, and will do this over the coming years, continuous capability upgrades and improvements, so that we are not just waiting for something that only appears in five, six and seven years' time.

This is something new, and it is part of our wider strategic intent, which we can come back to later, and which talks about really beginning to put capability on a much more regular basis into—

Sir Geoffrey Clifton-Brown: We will come back to that wider capability later.



Q5 **Nick Smith:** Mr Williams, thanks for that update. Ajax is really important in south Wales for jobs, but of course it is a really important vehicle for our armed forces. I am pleased to say that trials have been successfully completed on noise, vibration and headsets. You talked about further trials on reliability and growth. Can you tell us when vehicles will be delivered to the Army for use in the field? This programme has dragged on.

David Williams: We have not reset a date for that. We look to set that by the end of this calendar year, in the light of data from this phase of trials, and after engagement with GD over the contract. We are not in a position to do that yet.

The reliability and growth trials are a series of trials that we have planned to undertake in this programme from the off. They simulate battlefield missions, and include extensive driving, firing, and manoeuvring over a 48hour period. I would expect those to begin in the first part of 2023. Then we will refine what that means for the in-service date, based on experience of those trials. We will look to set an updated IOC or FOC through approvals around the end of the year, but that is something we are working through at the moment.

Q6 **Chair:** Do you mean the calendar year or the financial year?

David Williams: Yes, almost certainly one of those, Chair. I mean the calendar year.

Chair: It is bingo; we have Mr Williams with one of his dates.

Q7 **Nick Smith:** It still sounds as though it will be 2025 before it will be in the field.

David Williams: I do not want to give you a date today.

Chair: Good try, Mr Smith. Mr Williams is a professional at this.

Nick Smith: That is such a long time.

David Williams: It is a long time, but the results from the trials are encouraging, and we are all focused on how we move forward to the next phase of this programme. It will be a really important capability for the Army, when we are able to field it.



Q8 **Chair:** It is good news that you are confident. Let us hope that that confidence is followed through on. I wanted to acknowledge on the record what your letter said about accounting officer assessments. I recognise that we have 54 of the 235 major programmes. You have a big task to get up to date with the accounting officer assessments. I wanted to acknowledge that, if we can have most of them by the end of this year and the remainder by the end of the financial year, we are content with that.

David Williams: We are on track to do that. The ones that will spill over into the next calendar year will be either those where there is a major approval point scheduled for 2023, or those where there is a bit more work to be done in going back over the programme history. We will get the majority of those done before the end of 2022.

Q9 **Chair:** I am sure they will be top quality, to set an example to the rest of Whitehall.

David Williams: They will, yes.

Q10 **Chair:** Good. I know they will. They are very useful to us, so we are very pleased that they are going to get up to date. When you and Mr Pate were here last time, we discussed the really challenging issue of inflationary cost pressures on the MoD. That was back in June. We have seen huge upheaval. In fact, since your letter, we have seen a major market meltdown. Is there anything you would like to add on what is happening and the pressures on your budget? It is your opportunity, Mr Williams, to put your case before the Chancellor gets on his feet on Thursday.

David Williams: A number of people are waiting to see just how the autumn statement plays out on Thursday. The Secretary of State recently set out his short-term priorities for the defence budget and for help in dealing with some of those inflationary pressures. We need to wait for the autumn statement to see where we are on the immediate short-term budget for the Department. The longer-term trend then for defence spending, logically and practically, flows from the refresh of the integrated review that the Government have in hand. I would expect the report in the first part of 2023.



Q11 Chair: It is fair to say that your £16.5 billion over four years will get eaten up pretty quickly by all impact of inflation and foreign exchange rates. Are you already thinking of trimming, just because of inflationary impact? Unless you are going to get a very big settlement on Thursday, which probably nobody is, you are going to be in difficulty, are you not?

David Williams: Part of the challenge is putting a precise figure on the inflationary impact. On the one hand, you can see cost pressure through pay supplements, both in the public sector and in industry. You can see price pressure on raw materials. How far the industry inflationary pressure translates immediately into pressure on the budget, as opposed to pressure on deliverability, is something we are working through.

Assumptions about pay awards next year and beyond are just that—assumptions. Rather than there being a specific figure that I have in mind, there is a range. As you know, we have some in-built contingency in our forward programmes. On foreign exchange, we forward-buy, so in-year only about 20% of our currency use is subject to foreign exchange rate fluctuations. With the budget that we currently have, it will be difficult to deliver the programme in full next year in the way that we envisage. We are engaging with the Comptroller and Auditor General at pace on finalising the equipment plan from April this year. I am sure this will be a topic for our hearing in December.

Chair: We are looking forward to that. Then we will have details from what the Chancellor says, but it is worth highlighting that the inflationary pressures alone mean you are not just standing still; you are going backwards in your funding. We could talk about that forever. One of the issues we are talking about today will be how you can pay for the staff that you need in this very highly specific area, which we will get on to in a little while.

Q12 Sir Geoffrey Clifton-Brown: I turn first to Mr Lee. Good afternoon. You have responsibilities for digital transformation, security resilience, space policy and science and technology, so you have a very key part in this. Can you tell us what the lessons from Ukraine are, so far, about digital technology?

Laurence Lee: Good afternoon. I will certainly have a go. They are still emerging. The first one is that we have seen the Ukrainian population and military work at speed to exploit their digital skills more broadly from their education system and work. They have been able to quickly mobilise deep expertise to support their war effort. There is very much something about skills here. Ukraine, through its own investment, is quite advanced in that regard.

The second thing is, from a technology point of view, we have seen—and this is in open source—the Russian military's capacity to use electromagnetic spectrum to counter Ukrainian forces and manoeuvres and so on. The lesson I draw from that—I do not think is actually a lesson from Ukraine in particular, but Ukraine gives it particular prominence—is



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that the UK's capabilities as a part of NATO, or other alliances' capabilities, need to be secured by design. They need to be resilient to cyberattack.

The third lesson or area is pace. We have seen the very welcome brigading of western donation of military capability and hardware to Ukraine. Of course, not all of those systems talk to each other. The key challenge that, frankly, all militaries face is system A talking to system B, and being able to talk to commander C in location D, using information from satellite E. There is something about integration at pace.

The final thing I would note is that the need for innovation and integration at pace runs very much counter to how we have approached procurement and acquisition for many years. I would say that our approach has been, rightly, very well researched and evidenced, and has taken a long time, not least for reasons of integration. We are moving to an era where our capacity to get our hands on some code from a private sector company tomorrow, not in 10 years' time, and to operationalise that, will be the decisive factor. That means reform of how we think about acquisition and procurement.

Q13 Sir Geoffrey Clifton-Brown: Paragraph 2 in the summary on page 5 says that the Ministry of Defence "is not set up to implement digital technology at speed and scale". That must be pretty worrying, in view of the answer you have just given.

Laurence Lee: Yes. I would point, though, to the delivery against this strategy that there has been already, which starts to get after that risk and that challenge. One of the outcomes that we are getting after, as the NAO Report rightly digests perfectly, is the digital backbone, which is a combination of people—we will talk about skills, no doubt—technology and processes; that goes to your pace point. Secondly, there is the foundry, which is our way of describing data and analytics and how we can bring those together very quickly to deliver capability or services to business users or battlefield commanders. Thirdly, and very importantly, is how we enhance and empower the digital function across the 16 business areas of defence.

A combination of things will allow us to get after that at pace. One is acquisition reform. In that space, we have an offering that we are calling Commercial X, which we launched in the City about three weeks ago to a group of technology businesses. Fundamentally, this is about taking a different approach to software and technology acquisition than to, for example, acquisition of a frigate or submarine. They are very different, but the processes and controls that we are operating need to be flexed in order to do that more quickly.

We are building a cadre of accredited commercial officers who have this different way of thinking to help us get after that acquisition. I see that there are a number of examples that we are embedding across defence that will



help us speed up that pace. Some component of all of your questions will probably come back to skills.

Sir Geoffrey Clifton-Brown: We will be touching on that later.

Laurence Lee: It is worrying, but we have, through this strategy and the plans that we have in place, a way through.

Q14 **Sir Geoffrey Clifton-Brown:** That is quite interesting. Without getting on to specific skills shortages, which others will raise later, you indicate that this whole effort in digital in MoD is going to be a combination of the private sector and your own staff. What is the balance between using the private sector and having your own skilled staff? Is it dictated by staff shortages, or is it out of necessity and where the innovation is coming from the private sector fastest?

Laurence Lee: I might just top the answer to that. I think the Committee really understands that technology skills are a problem for our economy writ large. The workforce that Mr Forte has—and he can say more if you are interested—is a combination of civilian, military and contractors. We may come on to how we are upskilling those people in due course. Necessarily, it is drawing on a range of commercial and academic partners. We—David, the chief and vice-chief of defence and I—are thinking very much of the defence enterprise as encompassing all those groups. Mr Forte has some really innovative plans to draw skills from the very big technology primes in support of this agenda.

Q15 **Sir Geoffrey Clifton-Brown:** Let us come on to you, Mr Forte. Page 27, figure 6, tells us that five of those major projects are RAG-rated either red or amber. It must be deeply worrying that so many of your major projects are rated by the IPA as either red and undeliverable, or amber and having serious question marks.

Charlie Forte: It is clearly worrying, and it gets to the heart of one of the key elements of our strategic intent, which is to get after upskilling our community. That is not just in technical specialisms. It is also in those broader programme management and business professional areas that we need. We talk internally about the fact that we work at scale with the marketplace, and if you want world-class suppliers on your team, you have to be a world-class customer. That is at the heart of what we are doing in trying to bring our skills up. I can talk specifically about each of the programmes that are at red, if you want me to, and the plans.

Q16 **Sir Geoffrey Clifton-Brown:** No; as a Committee, we want to get a feel for what you will do about them all as a whole, and when they will get back on track.

Charlie Forte: We already have in place a major internal training and education scheme, which is equipping people at all stages of their career—at early, mid and later career—with more modern skills and capability. We are also really quite aggressively recruiting in the marketplace. We have been focusing really heavily on the brand that we can bring to bear in what



is clearly a very hot marketplace, in which we clearly will not be able to compete, in terms of basic cash, with some other parts of British industry. We can give people access to really interesting and innovative areas of work that build their skills and capability. People genuinely see that as attractive. We noticed last year, when we put job adverts out, that where we changed the emphasis to talk about the internal training and capability that we are beginning to put in place, our number of applicants went up—some cases by 20 times. There is an interest out there, and we have been very successful at multiple layers, including at senior level.

My senior team is about 50% people we have attracted from the outside. Interestingly, it is also 50% gender-diverse. It also has internal military people and long-term civil servants. We have been extending this right through the rest of the organisation to build the different kind of diversity and workforce. This is something that we are going to have to continue to invest in. We will not approach this as, “One bound and they were free.” This is a long, multi-year journey that we will have to undertake.

My last point is simply that we will not do this on our own. To one of your earlier points, we will also have to work in a very different way with UK industry. We will, of course, continue to work with the defence primes. They are important, but we will increasingly look to the larger-scale, high-tech organisations. In particular, we also want to find a way to encourage more SMEs to come on board and work with us. At the moment, it is cost-prohibitive for them to come and work with the MoD, so we are tackling that. We can talk about some of the things that we are doing to do that. The ecosystem of people that we need to work with, if I can call it that, is really quite important, and we are not there yet. We have multiple things yet to do.

Chair: We will come back to skills in more detail later.

Sir Geoffrey Clifton-Brown: I looked at some of the seminal documents that the MoD have produced in the last year or so. The “Defence and Security Industrial Strategy”, written in March last year, does not mention digital until page 29, and you have to get to page 99 to get any substantive discussion on digital. I looked at “Global Britain in a Competitive Age”, the integrated review. That had a bit more about digital. Then, of course, I turned to your own document, “Digital Strategy for Defence”. In the foreword it says, “As the digital world rapidly changes so too will our assumptions. We will iterate and refresh our strategy within 18 months, and further expand on how we will build the new digital foundry. As the great Charles Darwin once wrote, ‘It is not the fittest, nor the most intelligent that survives. It is the most adaptable to change’. Perhaps if alive today, he would have amended to ‘most adaptable to digital change!’”. I am sure you recognise those words, Mr Forte, because you wrote them.

Charlie Forte: Yes.



Q17 Sir Geoffrey Clifton-Brown: Why do we need to keep refreshing our policy? Why can we not have a plan and stick to a plan, rather than finding it is not working and then having to go into a massive reset?

Charlie Forte: It is important that we continue to evolve. I am not sure that I would characterise what we are trying to do in the description you have just outlined as going back to basics and completely changing our plan.

Sir Geoffrey Clifton-Brown: You wrote it.

Charlie Forte: That is not the intent. Our intent is to keep evolving, exactly as you rightly highlighted. We are sticking absolutely to our plan, in terms of delivering the promises that we set out in the IR for 2025. We need to respond to changes in context, such as Ukraine. What do we learn from that and what do we need to bring in? It is additive. It is bringing new things in on an iterative basis. It is definitely not about going back and starting again.

Q18 Sir Geoffrey Clifton-Brown: I was not aware that you were going to have a refreshed policy within 18 months. I was aware that it was going to be renewed up to 2025, but what does the 18-month refresh actually involve?

Charlie Forte: We are in the process of going through that now, and it is exactly as I have outlined. We are looking at lessons learned from our own actions in implementing the strategy—at what we need to learn from that. If you look at our actions out to 2025, at the moment about 80% of our effort is on what I would call fixing the enablers, the core basic foundational things that we need to put in place. About 20% is on exploitation. By 2025, we want to have turned that round, so that we are on nearly 20% fixing enablers and 80% on exploiting. There is an illustration of the kind of change that we need to progressively keep working through our system, updating our plans as we go.

Q19 Sir Geoffrey Clifton-Brown: Mr Lee, how can Mr Forte, as the CIO, work when he is accountable for the whole of the Department's technology and data, but only £2.7 billion of the MoD's estimated £4.5 billion digital spend? Why does he not have control over the whole of the MoD's digital programme, as the CIO?

Laurence Lee: That is a really good question and one that we have been working through assiduously for the last 12 months. We have got to a place where there are a number of levers available to us that were not available when Mr Forte wrote that piece. Of course, we want the CIO to have at least visibility and transparency regarding all the digital investment across those 16 organisations. We are close to having that in place.

There are changes I would highlight to you. The first is that the role of the Second Permanent Secretary is a new or recent one for the Ministry of Defence. Of course, we have had this role before. A lot of my time is spent as senior champion for digital, and that really helps.



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The second thing that is different is that the quad, as we call ourselves—Mr Williams, me, the chief and vice-chief of defence staff—has identified digital transformation as its overriding priority for change across the defence enterprise.

The third thing is that the Secretary of State gave very helpful direction in the summer around his expectations of de-duplicating digital investment, around expecting frontline commanders or chief executives of enabling organisations to be making digital investment decisions—that is the £1.7 billion you referred to—for the best interests of defence, not only the organisation that they are charged with delivery against and responsible for.

Finally, some work is coming to fruition in the next few weeks around empowering Charlie's finance director to have complete visibility of all the investment. That means that she will have financial levers of control. She will be able to sit on investment boards of those organisations. We should have a much tighter and more integrated, coherent understanding of all the investment, which I think gets to your question.

Q20 Chair: She will sit in every bit of the system that is spending money on digital.

Laurence Lee: Where there are significant business cases or investment decisions to be made, the defence digital finance team will have a role to play in ensuring coherence.

Chair: That is amazing visibility.

Laurence Lee: It is progress.

David Williams: I will give a very brief gloss. Alongside the transparency point that Mr Lee has talked about, an important role for Mr Forte's organisation—we have made some good progress on this—is about setting common standards, so a common data standard, a technical architecture that spend across the Department needs to be consistent and compliant with. Rather than necessarily having to have all the budget in one place, if you have visibility of the spend, and that network of CIOs and common standards, you can get the effect that you want.

Q21 Sir Geoffrey Clifton-Brown: Can you take us through what funding has actually been allocated to digital? How is that affected by its sitting in the Strategic Command and having to compete for funds against equipment? Also, how is it affected by the savings that you are expecting digital to make over the next 10 years or so?

Laurence Lee: The answer to the first part of your question is £4.4 billion. £2.7 billion is managed by Mr Forte and Strategic Command. £1.7 billion is managed by the enabling organisations. I may come to Mr Forte for some more detail.



Charlie Forte: We have a specific transformation programme, which is adding some new things in that got us going, if you like. That is about £1.8 billion over the coming years. We are increasingly moving, as we get pace into the programme, to repurpose existing spend in the £4.4 billion. Our intent, as we go forward, is to repurpose money that is being spent that, when it was originally authorised, might have been a little bit more siloed than it should have been, to still deliver the outcomes promised, but in a way that drives greater cohesion and integration. We are beginning to build momentum on that.

Q22 **Nick Smith:** Give us an example.

Charlie Forte: An example would be our core networks programme, which is one of the programmes that has just recently been marked red. One reason IPA marked it red is that we specifically intervened, were looking at the technology plans, and were engaging the marketplace for our core support activity. Because of our strategic intent, we looked at it and said, "No, we need to take a pause. We need to make sure that we are upgrading and updating our technology ask before we go to the market." We have done that, and are putting in a significant number of changes to how we want to design that core network technology, which will take us right out into the battlefield space. IPA has rightly made that red, against our original plans. Taking a longer-term view, I would argue that we believe that doing that puts us in a much more optimal position to deliver what we need to deliver in support of strategic intent. That is a good example.

Laurence Lee: If I might, I will add another one, which illuminates further opportunities. The cloud—an official sensitive cloud that is up and running—has 300,000 users. We have recently migrated 47 Army applications into the cloud. That saves us £7.5 million over five years. Further applications will be migrated to the cloud at increasing pace. That gives us opportunities to save more money and manage our in-year pressures.

Q23 **Sir Geoffrey Clifton-Brown:** Can I come to you, Mr Williams? We have heard in previous hearings that the additional £4.5 billion you have on the equipment budget this year, out of a total of £16 billion over five years that you were granted by the Prime Minister earlier this year, is under severe pressure. It is being committed to all sorts of pots. There is the £1.8 billion figure that Mr Forte has just talked about, out of a total of £4.4 billion. How secure is that? Is it committed absolutely to digital, or is it subject to change?

David Williams: We have not required, I think for the second or third year running, TLBs to take part in an in-year savings exercise. We are happy that we can live within our budgets this year, so in-year, it is secure. We are currently running through our planning round for future years. As the report sets out, in actually moving to the strategy being funded, we have used our planning round to put more money in than when the strategy was originally agreed.



Off the top of my head, though I would have to check, steady-state spend plus transformational spend over the 10-year period is probably about £30 billion of that £240 billion total equipment plan. There is scope within the steady-state spend to reprioritise in the way that Mr Forte has described. I come back, in part, to Mr Lee's earlier point: this is the single top transformation priority for the senior leadership of the Department, so it is something that we will want to protect.

Q24 Sir Geoffrey Clifton-Brown: I loathe constantly talking about inputs. I like to talk about outputs. Is £1.8 billion out of £4.4 billion sufficient to deliver all the outcomes that you need to, and that this report refers to, including sufficient money to enable the TLBs to recruit their sufficiently skilled IT staff? Will you still need to increase the amount of money you need to spend to achieve the outcomes stated in this Report?

David Williams: We may come on to this, but Mr Forte may have a view as well. The rate-limiting factor for us in delivery is more likely to be access to skills than money.

Sir Geoffrey Clifton-Brown: If you cannot pay them—

David Williams: Pay is a factor in that, I agree, but availability of funding is not necessarily the constraint.

Q25 Sir Geoffrey Clifton-Brown: All the TLBs are not yet authorised to pay up to scale, as I understand it from the Report. Is that true?

David Williams: We are now moving to extend the digital pay framework across the whole Department.

Q26 Chair: When we met in the MoD a little while ago, we were talking about headcount. You mentioned your headcount, and the limits on payments that you can make to staff. You have the digital framework. Is there anything more that you need to do to make sure that you can pay people the right rate for the job? Do you need more flexibilities, basically, from the centre?

Charlie Forte: The pay freedoms that we are in the middle of implementing are wider HMG pay freedoms in the DDaT profession.

Chair: They are in step.

Charlie Forte: We are doing this in concert with the rest of Government. That is important so that we do not get out of step, because we then create an internal market that is self-defeating.

Q27 Chair: How do you think that will relate to your competition with the private sector?

Charlie Forte: In money terms, it is not going to compete. We would be foolish to pretend that it will. We just brought 50 new graduates and other apprentices on board and we are going to upscale that. We need to train people through. We need to be happy that they will leave and join a wider UK prosperity conversation. We should expect something back from British



industry, which we are already getting by way of access to training and facilities.

Q28 **Chair:** In response to Sir Geoffrey, you talked about how, when you changed the wording of an advert, you had a 20-fold increase. Why is it that that has only just been realised, if it is that simple?

Charlie Forte: With the benefit of hindsight, there are many things that we learn. That is definitely something that we have realised and understood—the need to put out there our wider, positive brand attributes, the interesting kind of work that we do, and the ability to learn and grow your career.

Q29 **Chair:** It is basically advertising better.

Charlie Forte: Absolutely, yes.

Chair: I should give a shout-out to Silicon Milkroundabout, which is on the edge of my constituency, where you get the silicon roundabout—we call it Hoxton—and people come in.

Nick Smith: It is great that you got a 20-fold increase in interest.

Chair: That is not for every job, is it? It is the high point.

Q30 **Nick Smith:** It is okay to pick one interesting job, one field that you do and get a 20-fold increase in it. Is that true across the piece? Are you receiving more applications in the round in the advertisements that you do?

Charlie Forte: I am not sure I have detailed stats on how all the job adverts are playing out in the marketplace, but it is not a single event.

Q31 **Nick Smith:** That is what I am trying to understand. Is this a single event, or is this happening across the piece?

Charlie Forte: No.

Q32 **Chair:** That is a high point, but there are other good successes.

Charlie Forte: Yes.

Q33 **Nick Smith:** Can you write back to us after today, showing what is happening across the Department, please?

Charlie Forte: Yes, of course we can.

Q34 **Anne Marie Morris:** General Copinger-Symes, the nature of warfare has changed over the years, and we no longer look simply at tanks. Indeed, I think most of us thought before Ukraine that the sort of warfare that we are seeing in Ukraine was consigned to the history books. Warfare now includes attacks on financial systems. It will include attacks on health systems. We could have a viral release. We could have chemical warfare. As war changes, so the nature of defence must change.

What we have discussed so far has been quite constrained, in terms of



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defence on the battlefield and in the office. Given my proposition that warfare is much broader, and that therefore your defence, if you like, needs to cross a broader realm, should the digital strategy that underpins all that be better integrated? I would be very interested to hear whether you agree. Do you think that the way we deal with the digital strategy is fit for purpose? It seems to me to be in boxes: Ministry of Defence box, cybersecurity box, Cabinet Office. Can you see a need to join the dots, and do this in a way that is strategically future-proofed, which seems to me to be the way we need to go?

Tom Copinger-Symes: Thank you and good afternoon. I am going to sound like a pedant for a while. We actually talk about the nature of war staying pretty constant. That may change in due course with autonomy. For the moment—and Ukraine is reminding us of this—it is visceral, brutal and awful for everybody, whether you are a civilian, a soldier, a sailor or an aviator. We say that nature is fairly constant; the character changes rapidly over time with things like technology and societal change. I know that that sounds pedantic, but that is our approach to this.

The character of warfare is absolutely changing. As you say, attacks on financial systems, whether intentional or not, whether it is overspill from NotPetya into the health system or not, whether it is targeted or not, are a feature. Do we need to better integrate with other bits of Government, with other bits of our allies, intelligence agencies or whatever, and indeed with industry? Exactly as you are suggesting, everything is a potential target now. The home front that we used to talk about has probably expanded ever more.

Some of this is not new. I suspect that our fathers and grandfathers absolutely understood that this was a whole-of-nation effort, not just a “Defence people in uniform” effort. That speaks to the point earlier about a whole-force approach. As Mr Lee and Mr Forte said, this is a thing for soldiers, sailors and aviators, both regular and reserve—we might come back to the role of reservists in providing some of those higher skills on a part-time basis, because they can live two lives, if you like—as well as for civil servants and contractors and industry partners. That is a very important function of it.

To your specific question about how we do that, how we integrate with, for instance, intelligence agencies, clearly I am not going to go into too much detail today. For instance, we are creating shared architectures where we can work much more fluidly with other parts of Government. Covid, yet again, was a great propellant for this, however sad it was. You will have had troubles in taking testimony from defence folk during Covid on getting teams to work with Google Meet or whatever it was, so it is even that level of integration across bits of Government. It was a great propellant to sort out those problems. We are not there yet. It is not perfect, but absolutely, in exactly the way you have suggested, we need to work out how the data flows much more easily between different bits of Government.



There is then the exploitation that Mr Forte mentioned. If we are 80% sorting out that data flow at the moment but we want to move to 80% exploitation, how do we do that exploitation much more easily with other bits of Government and indeed our allies?

Q35 **Anne Marie Morris:** That is helpful. Mr Lee, in the light of what General Copinger-Symes has said, do you believe that this new digital strategy for defence encompasses that vision? Does it have the flexibility that is needed and the drive for integration that it is recognised is needed?

Laurence Lee: Yes, absolutely. The sentiments and positions that General Copinger-Symes has taken absolutely run through this strategy like a golden thread. The capacity to connect and the capacity to innovate quickly are captured in the foundry element of the strategy. That only comes to life if the backbone—the people, technology and process part, the capacity of data to flow from anywhere to anywhere and for us to drive value from it—is in place.

I would add to this integration question with allies. We have seen this very welcome gifting of munitions to Ukraine and a real focus on supply chain resilience and the capacity of the West to replenish its stocks. There is an emerging conversation within NATO around this very question of data interoperability. As the General has made clear, it relies on common architectures. I am expecting us to be participating in that conversation pretty strongly. The capacity to connect a sensor to an effector is very much the future, and this strategy very much has that in mind.

Q36 **Anne Marie Morris:** If we take a domestic example, supposing there was warfare that was a viral outbreak, and we had to set up field hospitals and have surgeons operating with advice online from the real expert, because the real expert could not be in the hospital that had been set up. Are those the sorts of discussions you are having with the Department of Health? Are those sorts of ideas being debated? Do we have the provision already in mind, even if not actually delivered?

Laurence Lee: I may refer to Mr Williams on that. If I think back to the beginning of the Covid pandemic, it was software that brought the data together in a way that allowed decision-makers to make prioritisation calls. I am very pleased that this team supported the NHS with the provision of laptops at pace to allow hybrid working. It is a combination of being able to work from anywhere and having the right people in the room. The technology that we have today, which Mr Forte has delivered, allows us to do that. Then it is how policy works and how seniors across Government come together to solve those problems. The issue that you raise can be resolved by technology now, if we can organise ourselves to do that.

David Williams: I agree with that. A focus on resilience, in light of Covid and events in Ukraine, will be quite a feature, in part at least, of work to refresh the integrated review. The word “integrated” in the title of that work is key. On the specifics, I am not particularly party to conversations in that space. Having seen the range of armed forces support into the



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health sector from the other end of the telescope during the first year or so of Covid, those are the kinds of issues that we think about.

Q37 **Mr Djanogly:** Mr Lee, you were talking about the interoperability of systems being improved. Not knowing much about this area, is that not the point of NATO? When NATO has an exercise, is the whole point not that different countries' systems are seeing how they work with each other?

Laurence Lee: Yes.

Q38 **Mr Djanogly:** You seem to be talking about it as though it is a shock to the system, and we are learning things in Ukraine that we did not know about before.

Laurence Lee: No; the point I meant to make was that the pace of technology change requires us to think about integration and connectivity in ways that we would not have done 10 years ago. I do not want to speak for NATO partners, but it is evident that, if what we say is true for the UK defence system, it will be true for NATO partners and western partners.

Q39 **Mr Djanogly:** Are you doing this stuff with NATO partners?

Laurence Lee: Yes.

Q40 **Chair:** It is just the pace of change.

Laurence Lee: Yes.

Chair: Thank you for that clarification.

Q41 **Anne Marie Morris:** Mr Lee, are all Government Departments included in the one-on-one "What will you do in these circumstances?" Are there some Departments that have been excluded? I have mentioned health as an example, but there will be similar circumstances in a number of other Government Departments.

Laurence Lee: Do you mean in a digital sense or a crisis response?

Q42 **Anne Marie Morris:** I would have thought that BEIS, for example, would be another prime candidate. If we go across all the Government Departments, have you actually gone through, thinking, "Which ones do we need to prioritise? Which ones, for now, do we put to one side?" so that your digital strategy is truly integrating where it needs to be integrated?

Laurence Lee: There is a Government digital strategy. A new one launched this summer, which we are very supportive of and take part in. Indeed, I sit on the Cabinet Office's digital and data board. This is where these conversations come together, albeit with a focus on the delivery of public-facing digital services—that is, what the members of the public access. For example, in defence's case, "I would like to get access to a relative's service record." There is a real focus on improving services to the user.

Q43 **Chair:** That is the easier end.



Laurence Lee: Yes, but the conversations about the DDaT framework, which we have described already, happen at this digital and data board. All the Permanent Secretaries are invited to that. That is where we combine and make policy. We work very closely with BEIS in all sorts of domains, but certainly on digital. It feels joined up. The integrated review and spending review that is happening now inevitably is going to focus on technology as a means to make services more affordable, so that is a live conversation.

Q44 Anne Marie Morris: On the international front, I think that the response you gave was that you were looking—maybe the general also made this comment—into interoperability. We are not yet there, are we? If something happens, heaven forbid, before we have interoperability, what is there in place to enable that international workaround, and our working together, to ensure that the defence of this nation, and indeed others, is delivered?

Tom Copinger-Symes: All is not lost.

Chair: The man in the uniform reassures us.

Tom Copinger-Symes: It is absolutely fair to say that there was the high point of the Cold War, when we were really good at this, and of course that was not just about data. It was about fuel or what calibre your artillery ammunition was, so that we could exchange things across a multinational force really quickly. We probably have come off the pace a bit, and I will explore why that is really important in this area, but we still have a whole load of standardisation agreements—STANAGs—that rule NATO on that horizontal.

Where things have changed—Mr Lee referred to this—is that we try to automate things far more than we used to. In the days of the Cold War, when I joined the Army, it was perfectly normal that you would have a human liaison officer passing data on a piece of paper across a headquarters. That was how you would liaise with your American colleagues on your right, your French colleagues on your left or whatever it was.

Now, we are trying to automate that. We are trying to get the data flowing without a human having to be in the loop, where it is sharing information. That is a level of interoperability above where we were in the past. Exactly what you see in financial services, or however you book your taxi on the way home this evening—that is what we are aiming for. It is fair to say that we are not there yet. If we have to fight tonight—and we jolly well might—we have plenty of workarounds, and we exercise constantly in that space. Our ambition is very high, because every second, and frankly every millisecond, saved in this gives you an operational advantage on the battlefield. That is exactly what the Ukrainians are finding. By having that very tech-skilled workforce that Mr Lee spoke about, they are hacking their way to further speed and precision and developing mass by, for instance,



taking relatively dumb platforms and weapons, putting sensors in them and getting the data flowing. That is giving them a very significant advantage on the battlefield. That level of interoperability and innovation is our aim point.

Q45 **Anne Marie Morris:** That gives us a lot of comfort; thank you. Mr Forte, on legacy systems, one of the challenges in any IT system is the constraints that your legacy, if you like, puts on you. It seems to me that, over the years, the different reviews have kept repairing, if I can put it like that, what is already there, or adding a bit here and a bit there. I do not see the different approach that it seems that we need today, which is to ask the very hard question of whether we can fix and mend, or whether it is more cost-effective to start again with a different structure, a different approach. Is that a question that you have asked, and is there an answer?

Charlie Forte: That is a great question. I will give you an answer that has two components. First, let us look forward. One key thing that we have already done is put some compliance rules in place for all our future investments that talk about being compliant with our forward future architecture. As part of those compliance rules, we are also putting in place an expectation, which was not true in the past, that says that you have to put investment into this programme as you go forward, before you will be allowed to go, that makes sure you are keeping this system for its life up to date and current. Of course, with the pace of technology change, that is quite a substantial investment.

Part of the reason we have such a legacy estate problem is because that money has often, in the past, been traded out. We are no longer doing that. That will take some time to work its way through to a much more healthy estate that is not just more integrated but also more current.

My second point is that that does not fix the installed legacy base that we have. Part of tackling that is repurposing some of that existing programme money that I talked about. It is also about taking a threat and risk-based approach. We are not going to fix it all overnight, so we are very actively driving forward on fixing the immediate things that are the most important things for us to go fix. Those are two components of how we are tackling that, quite substantial, legacy technology estate.

Q46 **Anne Marie Morris:** How are you prioritising and deciding what needs to be fixed now and gets to be first in the queue?

Charlie Forte: It is a variety of issues to do with, for example, where we have legacy estate that might be prone to cyber risk or cyberattack. Where it is situated and what it is connected to will dictate where it sits in the priority of what we need to do to address it. That sits alongside other components of risk assessment, like what our priority for getting data to flow is. Eventually, all of our data will be available, wherever it is, and including data that we work with with our allies, partners and partners across Government. One thing we are looking at doing is making sure that, for our immediate priorities for data-sharing, data exchange and data value



delivery, we are using that to say, "That is where we need to go fix that legacy".

Q47 **Anne Marie Morris:** How are you going to evaluate and measure whether or not the £11.7 billion funding to do this has been well spent and whether the priorities you set were the right ones?

Charlie Forte: As Mr Lee said earlier—we had a conversation about the upgrading or continual refresh of our strategy—one of the things we are working through right now, with Mr Lee's leadership and sponsorship, is how we take the next step in linking what we are doing on all the digital enablers that we have talked about, while being much clearer about how all of those link through to defence-level military and business outputs. From the work we have already done, we have a view of what that looks like and what drives priority, but the next phase of work that we are going through, which we will complete early in the new year, is really about taking that to the next level, talking about defence-level outputs and being able to map where all of our activity sits in support of that. That will help drive priorities.

Q48 **Anne Marie Morris:** Where will I find this decision tree or decision table, and evidence as to how it has been used and whether or not the outcome was achieved?

Charlie Forte: We do not have that yet. We would intend to publish that as part of our updating of strategy early in Q1 next year.

Anne Marie Morris: That would be extremely helpful. Thank you.

Q49 **Chair:** We have looked at digital across Whitehall, and one of the things the NAO highlights in relation to this particular plan—this is in part 2, page 21, paragraph 2.3—is that the Department does not have an overarching delivery plan for the strategy. You have 90 digital programmes and projects in your portfolio, Mr Forte. The finance director or the finance directorate in your team has an eye on everything in all of those 90, but there is no overarching plan. Can you explain the rationale for that? Do you think it is right that you should have one? If not, why not?

Charlie Forte: First, let me be clear: all our programmes—the whole £4.4 billion as well as the transformation-focused programmes—have clear—

Chair: They individually do.

Charlie Forte: They have individual and clear tracking. I have just described the step we are going through. We are raising that up to, "What are the clear dependencies?" and, "How do all of those programmes come together to impact, in a very clear and explicitly articulated way, defence outputs?" That is exactly the process we are going through. That is exactly, rightly, what the NAO Report is saying that we have to do. We completely agree with that.



Q50 **Chair:** That is good to hear. When you have that plan, how are you going to be measuring success? Your area is very complex. You have the most complex area, Mr Forte, of any digital officer we have met because of the layers of security and challenge. Can you perhaps just talk us through—it might be easier for us to understand that way—some of your achievements so far, and some of the achievements you are hoping to get? Can you link this together at the level of the 90 individual projects, and say how you will deal with that strategically? Can you just walk us through what the challenges are?

Charlie Forte: I will very quickly give you a couple of additional things that we have already done. Mr Lee talked about the progress we have made on cloud. That is a key enabler. During Covid we completely revolutionised our core end-user collaboration IT tools. We have now delivered 180,000 laptops. We had something like 20,000 when we went into Covid. Only 9,000 people could remotely connect and work when not in the office.

Q51 **Chair:** I would just stress that when laptops are delivered, even in Parliament where we have a degree of security, it is quite simple. You are talking about a much more complex laptop, presumably.

Charlie Forte: Yes, we completely upgraded not just the network but the security of the network in order to support that. We delivered modern collaboration tools that allow people to work with video connections and do the sorts of things that we are now all quite familiar with and working through. At the beginning of Covid, we had almost none of that. We had plans to do that, but Covid helped us. That was a huge credit—



Q52 **Chair:** That is a credit; it is a great thing. It is a lot, and it is more difficult because of the security. Lots of other organisations did that because of Covid. Are there any other examples you can give of what you have achieved so far within those 90 projects?

Charlie Forte: One of the things we have talked about a couple of times is our focus on data. Data in the Department is part of our legacy estate. It is almost hidden away.

Chair: Yes, not just in the Ministry of Defence.

Charlie Forte: In some cases we do not even really know fully what we have. Of course, our data is not just important to us. It is important to other partners in Government, and it is important when we are on joint operations with our allies.

One of our big strategic intents is—these are fundamentally basic things that we are in the process of doing—understanding what data we have, cataloguing it, understanding who the steward of it is and who owns it. We are moving culturally—this is a challenge—to a place where we describe data as a strategic asset for the Department: “It does not belong to you; you only steward it. It belongs to all of us in service of our military and business outcomes”. That is a huge cultural step forward that we have begun to make, alongside the nuts and bolts of finding out what we have and making it available to people.

Q53 **Chair:** Can you just talk us through a precise example from one of those 90 programmes and projects? What are you doing with data there? How are you going to deal with that from a more strategic perspective?

Charlie Forte: General Tom can add to this one. The one I would use, in relation to harnessing data that was previously hidden in silos, would be about getting a much better view, at the senior level, of readiness in military planning. That is about equipment and people. We have taken huge steps forward in gathering data from right across the FLCs. This is equipment data, as well as people data. We are beginning to offer that back to military planners, who are now using it to begin to think in a very different way about military readiness generally.

Tom Copinger-Symes: That particular programme, predictably, is called R2D2. Do not ask me the names of the other programmes in that suite. It is about bringing core datasets together so we understand the readiness of our Army, Navy, Air Force and other elements at the push of a button rather than sending out—



Q54 **Chair:** It is a bit like a super-inventory with geolocation as well.

Tom Copinger-Symes: It is a little bit more than that. It is not finished yet. It is rapidly improving things, but it will take a long time to be the finished deal. In fact, it will probably never be the finished deal because we will keep on adding bits to it and iterating. That allows us—

Nick Smith: Would that not be R2D3?

Chair: Mr Smith wins joke of the afternoon.

Tom Copinger-Symes: It will give us a much quicker access to op readiness. In due course—we are not there yet—we will be able to model options. We will be able to look at a growing problem or a crisis somewhere; we will be able to see what we have in the locker; and then we will look at different courses of action and be able to advise what the political, financial and military risks are to those response options. We are not there yet. I want to be clear about that.

Q55 **Chair:** Roughly, when might that be? When are you hoping you might be there?

Tom Copinger-Symes: I will get back to you on what the roadmap looks like for when we will get to that predictive ability. I do not know that off by heart.

Let me give you some other examples, in light of where Mr Forte was. In a range of operations, both current and recent, we have had people either deployed forward into theatre or working in reach-back. This is a little bit like your telemedicine question earlier. How can I explain this sensibly? You are engineering data streams to an operational user, whether you are tracking migrants or indeed adversary actors coming into a particular area. You are putting that into a data analytics platform so the commanders, whether they are looking to help those people or do something much less helpful to them, can make those decisions much more rapidly.

Again, going back to working cross-Government, if you are looking at bringing large amounts of people back from somewhere into this country, you can work much more seamlessly, for instance with the Home Office, to pass on that information and prevent threats emerging in the country than you otherwise might. In the case of doing nasty things to people, that would be working with other allies to service those targets as required.

Q56 **Chair:** Presumably, it is things like bringing casualties back and alerting—

Tom Copinger-Symes: That would be absolutely right, yes.

Q57 **Chair:** That is all very interesting. It helps it live a bit more if we hear those specific examples.

Mr Forte, you have been in IT for years and years. You could perhaps give us a potted history, for the record, of your background. We have your



biography here somewhere. You have a very strong record in the private sector. You have come into one of the most complex Departments in Government to deliver this. In your professional opinion—I know you are now an employee of the Ministry of Defence, but we want your professional opinion here—why has there been such a struggle to deliver some of these major digital programmes so far? There have been two previous iterations of this strategy, in effect. I am sure there are differences. Why has it been so difficult?

Charlie Forte: We have already talked about some of the challenges. I will not belabour those; we have covered that. This is the first time we have, with senior support, really got our arms around seriously tackling—

Q58 **Chair:** I have invited you—you are too modest—to talk about your experience. According to what we have been given about you, you have had 38 years of experience working in this area. Is that right?

Charlie Forte: I am 66 this year, so yes. I have been around the block a few times. The role that I have, with the support of the gentlemen around me, all the senior leaders and the frontline command chiefs, is an opportunity that many senior CIOs would take my arm off to get.

This Department has really begun to understand what digital does and can do to its ability to win and, if they do not understand it, what it will do to its ability to lose. For the first time, digital is now sitting as a core part of not a digital functional strategy, although we need that, but as a core component of the defence strategy. Mr Lee outlined that. That is a fundamentally different place for us to be.

What is the key challenge we have in exploiting that? Yes, we need to be masters of technology. Of course we have to do that. We have to get after all the things we have talked about. One of the biggest challenges is cultural, and it is about the softer skills. It is about really understanding that being good at exploiting digital and data in the modern world is not a task you give a clever IT department. This is a team sport, and it requires multidisciplinary teams to come together to focus on outputs, not process. We have a history of focusing on process.

That is hard. I do not mean to be pejorative about any of the past, but that will not cut it for what we need to do going forward. The support that we have for each other and across the senior team in seriously getting after that is really quite impressive.



Q59 **Chair:** You have answered the question interestingly. To summarise, it is too important to leave to IT professionals. Is that what has gone wrong before?

Charlie Forte: Yes, it has to be at a senior level in the business; let us call it that. In this case, the business is primarily military. Yes, it has to be owned at the top level. That is what these gentlemen are doing.

Q60 **Chair:** Mr Williams, you are the Permanent Secretary. You are owning it now. We have Mr Lee with a very big portfolio dealing with all of these issues in the Ministry of Defence. Famously, you all now have five-year terms. You are counting down your five-year term. You have this as a priority now. We have a big spending cut coming. You have said today, "It is our top priority".

David Williams: I have not yet got to the point where I am marking the weeks off the wall. It is a priority. In the end, how far a leadership priority transfers into action is a question of the quality of the leadership. You have to hold us to account for that. The Department will hold us to account for that. I wonder whether Mr Lee might just want to say a bit about digital exploitation for defence and some of the work we have been doing with the senior leadership cadre.

Laurence Lee: Yes, Mr Forte is absolutely right: this is fundamentally about culture and behaviours. The reason why this remains a priority—we can give you some reassurance on that question—is that this agenda is a defence agenda, not a digital agenda. We are elevating the status of this work because it is what makes us win and it is what keeps us safe in the future.

To that collective leadership point, indeed we are meeting as a leadership team on Monday for the third time. This is the third workshop in a programme called digital exploitation for defence. This is where we are bringing together all of our senior leaders to talk about priorities for digital transformation for defence. One example of that would be the fact we have broken down all of our digital investment into three broad buckets. One of those is business processes. One of those we describe as campaign advantage, but you might think of it as warfighting, deterrence or the battle space. It is that end of the technology market. The central one is our capacity to generate new capability at pace.

An example from campaign advantage—on Monday, we are looking to work out which of the options we want to prosecute across the system—is thinking about how we can build a platform that will give common



situational understanding to all the domains. At the moment, each of the domains—land or air—has their own systems, processes and connectivity to provide them with an understanding of what is going on, whether in open source or on the battle space. There is clearly an opportunity to do that better for everyone once.

There are two things there. First, this investment will be increasingly pandefence, giving outcomes for defence as a whole rather than individual TLBs or enabling organisations. Secondly, in order to unlock that opportunity, the whole leadership team needs to be brought in and work towards that common goal. We are starting to see that happen.

- Q61 **Sir Geoffrey Clifton-Brown:** Mr Lee, can I take you to paragraph 25 on page 12? The top of that paragraph says, “The Department does not have a complete picture of its progress against the strategy and so cannot readily demonstrate whether it is on track to deliver it or not. To meet the needs of the modern battlefield, and enhance its business efficiency, the Department must transform a large and complex organisation with an extensive legacy estate, using scarce specialist skills. Given the scale of the challenge and the persistent barriers to change, achieving the strategy’s objectives by 2025 is ambitious”. Will you achieve it?

Laurence Lee: It is ambitious. This strategy and the plan we and Mr Forte have described takes us towards it. I very much hope we will achieve it. We have spoken about the dependencies already. If we cannot get the skills, that will slow us down for sure. The NAO is absolutely right in its clear recommendation that we need a single plan against which we can measure the outcomes. We are working towards delivering that soon.

- Q62 **Sir Geoffrey Clifton-Brown:** How will you measure? It goes on in that paragraph to talk about how the Department will measure success along the way. How can we on the Public Accounts Committee, Parliament and the public see whether you are delivering on that plan? How will you account to us?

Laurence Lee: We have already given you in the responses this afternoon some of the answer to that question. For example, there is the MODNet cloud delivery, the fact we have Office 365 for all of our users and the fact we are using technology such as Microsoft Teams, which allows us to work remotely. At that end of our delivery, things are happening, our users are experiencing value and we are more connected than we were.

In response to the last question, I was talking about digital exploitation for defence. To reassure you, perhaps, one of our key design principles is that against all of those three buckets—this is at the transformation end of our investment—we want to see measurable value in 2023. We want to design a plan that will give us clear metrics, not input metrics but outcome metrics. I want to be able to answer the question, both for defence and for you, “Why is it different? Why is it better?”

- Q63 **Sir Geoffrey Clifton-Brown:** When will we see that? That clear plan of



input metrics is a really interesting idea.

Laurence Lee: It will be outcomes. It will be against the outcomes rather than the inputs. We will clearly have the inputs behind the scenes.

Sir Geoffrey Clifton-Brown: When will we see that?

Laurence Lee: That will be a live plan for defence from 1 April 2023.

Q64 **Sir Geoffrey Clifton-Brown:** Thank you very much. Can I take you to the recommendations in paragraph 26 on the same page? The NAO has made these five recommendations. I am not going to go through all of them. The first one is that the Department "integrates the strategy with wider efforts to transform the Department, deliver efficiencies and exploit technology". How will you do that?

Laurence Lee: That is digital exploitation for defence. It is really highlighting that digital transformation is as much valued in the business process domain as it is in the warfighting domain. I talked about business process as one broad brigading of digital expenditure in the corporate services space. We will be looking at how we can brigade that and deliver value to all of our users once rather than many times.

Q65 **Sir Geoffrey Clifton-Brown:** The second recommendation is that the Department "identifies and prioritises all the activities needed to achieve its strategic outcomes".

Laurence Lee: All of the points in these recommendations need to be wrapped up in the plan that we will be running from April 2023. That will be our endeavour.

Q66 **Sir Geoffrey Clifton-Brown:** Can I take you to the table on page 16, figure 2? This is a horrendously complicated table for doing really quite simple procurement tasks. Why do you not separate out the relatively straightforward office tasks from the much more complicated defence tasks? If you like, get Amazon in to do the simple office tasks that have no real security implications. Just do it. I cannot see why you need to have this hugely complicated table to do relatively simple tasks.

Laurence Lee: It is a great example of what we do not want in defence. This is the point of the whole conversation for me. This is clearly timeconsuming, probably too expensive and not quick enough to deliver. I wonder whether Mr Williams might want to say a bit more about acquisition reform writ large. Perhaps before he does, the senior leadership team is entirely seized of what we describe as the bureaucratic index.

Q67 **Chair:** We did once look at some of the procurement issues. It was quicker for someone in Afghanistan to order new boots from the UK than it was to try to order them within theatre because of the systems. That is a simple demonstration of this rather clunky model not working.

David Williams: Yes, this figure is not our intended end state. It is a degree of the complexity we currently have. To your question, Sir Geoffrey,



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it is not simply a question of how we are joining up the sensors, weapon systems and personnel deployed forward on the battlefield.

Of course we need to do that for the military advantage, that campaigning advantage we want to see, but there is scope for us to transform the way we run the Department and the Armed Forces. There is scope to transform the routine business decisions that we are making week in, week out by better exploiting the data we have, bringing forward that data in a way that makes use of machine learning and AI to make connections we may not make, and doing so in a way that is geographically dispersed, rapid and so on.

There is a lot for us to go through here. As you have seen from the reports, we are making some assumptions in the Department's forward plans about levels of productivity improvement and cash-releasing savings from the digital programme that we can then reinvest in defence. The prize is there on both the business and the battlefield sides of the equation, which is not to say that you would approach each of those issues in exactly the same way. This is definitely not one size fits all.

To the broader point, as you know—we will come back to this in the equipment plan hearing later in the year—we are looking to improve our broader acquisition processes, particularly for the most complex programmes in terms of skills, the role of our senior responsible officers and programme directors, how we do our cost forecasting, how we do our contracting and how we can streamline processes to get the right decisions more quickly.

We absolutely need to do that if we are going to be successful in the digital space. Some of the techniques that we are able to learn here we will be able to apply sensibly into wider areas of departmental business.

Q68 Sir Geoffrey Clifton-Brown: Mr Forte, you are an expert on IT and digital. Can we be assured that in the 2025 update this sort of relatively simple but hugely complicated procurement within the MoD will be transformed?

Charlie Forte: To answer that, as Mr Williams was saying, we need to be clear that we need a number of wider business process changes, enabled by digital, to be delivered. We are in the process of doing that. This applies, for example, to logistics and support transformation. That is a core component of exactly the complexity that you see there. Whether across the whole of the estate we will have simplified everything down is—

David Williams: If the picture looks like this in 2025, we have missed the point.

Q69 Sir Geoffrey Clifton-Brown: That is correct. Hallelujah. Thank goodness for that. Why do you not sub it out to somebody like Amazon to do the simple stuff? They have all the procurement, warehouses and everything else.



Chair: There are other providers available.

Sir Geoffrey Clifton-Brown: I did say “for instance”.

Charlie Forte: We do and will continue, as I have said earlier, to use the marketplace as we go forward. If I look at our legacy issue, often in the past we have outsourced lots of the systems we have in support of exactly that model. They have been outsourced, but they have been outsourced in silos. That has not helped us.

First, we need to make sure that we are focusing, first and foremost, on our key strategic intent of integration. Yes, we will use the marketplace, but, where we work with a senior or even in some cases an SME, to help us do something, we need to make sure the rules of the road on how it joins up and how it integrates are in a much better place than where we have started from. That is really important.

Q70 **Anne Marie Morris:** Can I come back briefly on project delivery? One of the things you have made clear now, which is very helpful, is the metrics and the way you are going to measure outputs and outcomes. That is all going to be great stuff. The other thing, which Mr Forte mentioned, was the issue about culture. How are you going to improve project delivery? It will not just be a question of what you measure. There has to be a fundamentally different approach. What will that be to make sure you get what you want, on time and preferably on budget?

Charlie Forte: We are putting a lot of effort into making sure that our diversity of experience mix is part of how we build the skills and capability to go forward. We need people with existing defence knowledge and people with different skills from wider industry. That is an important part of bringing hard-edged skills to bear, but it is also about different mindsets.

We also need to be quite thoughtful about how we take a significantly large population of people who have grown up with a particular process view of the world and help them shift to a much faster-paced view of delivery, not just thinking about everything in a 10-year horizon and working out every single widget along the way. That is not how the software world works; it might be how the steel part of our world works. It is about giving people their skills and confidence to be able to make some of those changes. To do that, we have to work in partnership, not just inside the digital function, but with our colleagues in finance and commercial.

Q71 **Anne Marie Morris:** Let me just press you a little further. There are five projects in the report, and two of them are red. Clearly, what you need is a decision made very early on about anything that might be red. The reality is that having it existing and red will not solve the problem. Somebody needed to take a very hard decision a long time previously to say, effectively, “This is, frankly, dead in the water. This is either a misconceived project or it simply cannot be delivered. Therefore, we should axe it”.



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The sense I have is that there seems to be a cultural desire to try to keep something alive if at all humanly possible rather than, frankly, putting it out of its misery early and saving us all aggravation and money.

Charlie Forte: You have very nicely encapsulated some of the inherited legacy thinking that we have. What are we doing about that as we go forward? You have also rightly highlighted that it is about anticipating; it is about risk management.

In order to be good at risk management, we need to teach people to think differently first, but we also need to make sure there are some hardedged nuts and bolts in place and a different way of thinking about programme management MI, so that we have better access. We also need to be thinking about this teamwork component, which creates bigger and wider peer challenge and review. That also helps you to access the bigger brain, and helps you get better insights to anticipate where problems might come and head them off at the pass. These are all important parts of what we need to do.

David Williams: A red marking for a programme overall does not mean there is not good progress on a range of sub-programmes or sub-projects within that. In terms of MODNet Evolve—Mr Lee wrote to the Committee on this earlier in the summer—there are 19 programmes, 16 of which have either delivered or are on track. There are three still to go, which we will see delivered over the course of the next 18 months or thereabouts.

The New Style of IT Base, which is really the precursor contract, may be showing red because we have not gone back and reset critical dates, but it is the programme that allowed us to do that Covid rollout of new IT, with laptops, communications and so on. Even in red there can be value.

I absolutely get the challenge of, “When there is no value, how do you let go?” That is something where we need a more agile process, a process where you are building and layering capability in a spiral way, rather than saying, “It is a 10-year programme and it either works or it does not”. That is part of the cultural piece Mr Forte has spoken to.

Q72 **Anne Marie Morris:** Can you give me an example of one you have let go?

David Williams: In the digital space, I cannot, no. I do not know whether others can.

Charlie Forte: There was an example I quoted earlier: we had a plan to go to market for large-scale next-generation network external support. We intervened and said, “No, we are going to stop this”. We will talk later about Morpheus. That is another example of where we looked at what was going on and we intervened and said, “This is not good enough. We have to stop”. While that is not yet ubiquitous across the whole estate, we are beginning to bring a different kind of leadership thought to bear.



Q73 **Chair:** Interestingly, the evidence from BAE Systems—we have the evidence that you can look at—talked about how starting and changing things five times is cheaper than getting it wrong once.

Charlie Forte: Yes.

Q74 **Chair:** That is the same approach you are taking. That is interesting. That is quite different to a lot of digital projects we have seen in Government. The proof will be whether you can maintain that.

Charlie Forte: We will not get it right all of the time. This is not one fix. This is going to take patience over a number of years to get right.

Chair: You are getting your caveats in there, Mr Forte. That is very wise.

Q75 **Nick Smith:** I want to go back to something Mr Forte has just said. Can you just tell us what you have done differently over Morpheus, please, very quickly?

Charlie Forte: The intervention I referred to was around a particular component of the Morpheus programme, which is actually quite an important part at the centre—software-defined capability to switch new things in and have a software interface to make that work. We did not believe that was being delivered appropriately. We intervened with a supplier and said, “We need to pause. You need to stop”. We are now working through what the consequences of that are. Some of that is commercially sensitive. I will not say exactly where we are likely to go with that, but we will not be continuing with exactly all of the planned activity that was in place when we started.

Q76 **Nick Smith:** I hope to cover off some of the human capital questions you have talked about so far in a bit more detail. Mr Lee, what specialist digital skills do you need? How does that compare to the skills you currently have?

Laurence Lee: Yes, I thought you might ask me that, so I am going to tell you. There is quite a long list. We have a current demand for architects, business analysts, cyber advisory risk specialists, data analysts, developers, delivery managers, infrastructure engineers and IT service managers. In the future, we will need data science, AI, robotics, cybersecurity and product managers. It is a whole host of deeply expert, very scarce and very highly paid resource.

Q77 **Nick Smith:** Mr Forte, you talked about improving pay and better advertising, but clearly there is a lack of supply. What is stopping you from getting the specialist skills that have been identified?

Charlie Forte: What is stopping us is people looking at our previous brand, which we have to change, and us not showing people just how significant it is and what a great learning opportunity it is to come and join us. I can use the example of my leadership team. I will not be unfair to them: if a number of them were working somewhere else, they would be on a very different salary, but they have decided that this is the place for them to come and follow through on their next career moves.



Q78 **Nick Smith:** It must be exciting work. It must be a fantastic thing that you do, and it would be really interesting for lots and lots of people, but it is not working at the moment, is it? How are you going to ramp it up and improve your recruitment at scale?

Charlie Forte: It is not working yet at scale. It has worked in a key number of areas. Over the last 18 months, we have targeted about 150 what we call technical and programme management specialists that we need to attract. We have brought 107 on board. We probably need to double that in the next 18 months, alongside how we use their skills on the job to help grow some of the people who are currently here. We all learn from good people who work around us. It is that mix of how we go about it. Growing our talent base from early-career stage through mid-career stage and bringing new people in, knowing that people will leave as well, is part of creating that healthy mix.

Q79 **Nick Smith:** General, I was interested in a remark you made about involving reservists in digital work. Mr Lee talked about the Ukrainians having some success at that in the awful situation they are in. Do you have any examples of where reservists have helped out with this fantastic digital work that needs doing?

Tom Copinger-Symes: Yes, it would probably be invidious to mention names at this stage, but in cybersecurity we have a particularly skilled group of really quite senior folks who come in. It is probably not your normal reserve model that you would see in an infantry regiment. They tend to do concentrations of a weekend or two every few months. In some cases, Mr Forte or our CISO Christine Maxwell will give them a nutty problem that we want to get after. It can be very specific; it can be much more consultancy-based. Those would be very good examples of the reservist model.

Q80 **Nick Smith:** Are there many of them yet? How many of them are there?

Tom Copinger-Symes: In the part of the reserves that sits under strategic command, we are already over-recruited by an amount I probably should not admit to in front of the Permanent Secretary. We are looking for permissions to go well beyond that as well, such is their utility.

Q81 **Chair:** They are keen.

Tom Copinger-Symes: They are massively keen. We have to make it easy for them.

Q82 **Chair:** Do you have to backfill their salaries?

Tom Copinger-Symes: I do not want to promise for all of them. Many of them are very happy to come and work on some of this without getting paid at all, if I am honest, such is the level of interest. There is a huge blend.



There is breadth in our reserves. I come from the infantry. We have infantry reservists whose day job is in digital. In fact, the assistant chief of the defence staff for reserves comes from an infantry reservist background but is also a very senior technologist in a large technology company. That is instrumental. They did not necessarily join the reserves to do their day job as a reserve, but at a time in their life, suddenly they can connect the two careers, just by way of example.

To build on that, Mr Forte has focused on the specialist end of this. The current skill level of almost every single member of the defence workforce needs to increase by 2025; by 2030, it needs to increase even further. That is whether they are a general or a private soldier. An awareness of what data can do for you and what digital systems can do for you to help you fight is absolutely essential. They all have roles. As one of you said, this is too important to be left to Charlie. Everybody has a role in this, whether you are a soldier, a sailor or an aviator.

Q83 Nick Smith: You have anticipated my next question to Mr Lee. Mr Lee, what are you doing to build the digitally skilled workforce you need? How are you ramping up the people you have and enabling them, doing some personal development? How are you bringing in the people you need across the country?

Laurence Lee: We have an initiative called, imaginatively, digital skills for defence. The point the General has made about everybody—

Q84 Nick Smith: You are not taking notice of Mr Forte's ideas about improving your advertising.

Laurence Lee: Absolutely, we are one team. That is really about upskilling all of our people. The Defence Academy is now running courses, which our people are going on routinely. The Digital Academy, which is a separate subset of the Defence Academy, is running courses. We have had, as an example, 6,200 people graduate from that since March 2019. There has been real interest in courses like cloud basics, for example.

At the more senior end, which is really important—defence leaders need to understand this and be able to talk about it knowledgeably and convincingly if our people are to follow—we are running a thing called DLLP, which is the Digital Leadership learning programme, for all of us and our colleagues, to make sure we are hearing from industry, academia and big technology companies about both what is available but also how we can transform our business. What are the lessons we should learn from elsewhere?

The strategy also sees us think more thoughtfully about the AI profession as a profession in its own right. We are doing work also, as we mentioned already, to adopt that cross-Government DDaT pay framework across the team.

The final capping piece for me is that we are increasingly talking about our defence purpose, which is broadly to protect and defend this nation and to



make it more prosperous. That is such a powerful connector of what all of us here do with potential recruits for the future, as you have heard already.

If you put all of those things together, it sees us deliberately prioritising learning and deliberately building a workforce that knows a lot more about this subject than it did six months, 12 months or two years ago.

Q85 **Nick Smith:** It sounds great. Will it solve the supply issues that you talked about both for the specialisms and across the piece in digital?

Laurence Lee: You have heard from all of us that the capacity to get these clever people in is limited by the market and the pay. Despite what I just said about the purpose, it remains hard.

Q86 **Nick Smith:** You have to do better than the rest of the market, do you not? Convince us that you are going to do better than the market in doing this crucial job you have.

Laurence Lee: It is doing better than the market, but it is also looking at the people we have and upskilling and reskilling those people. As you just heard, we are getting after that vigorously and deliberately. If we cannot get from the market, although we will be assiduous about that in the way that Mr Forte has described, we will upskill our own people.

There is also a third strand to this, which is how we are working differently with industry, with the big technology providers, to get access to their skilled workforces in pursuit of defence outcomes. Mr Forte may want to say a bit more to round off your question.

Charlie Forte: Yes. Our internal skills and capability is one leg of this stool. I talked earlier about bringing in and working with SMEs, to a significant degree that we do not see today. Why are they interested? In some cases, it is about helping them really grow their business. There is real support for the UK prosperity conversation. We talked earlier about the industrial strategy, which did not have a lot to say about digital in it. We are about to update that. General Tom and I have been working closely on this. We will talk about how we support that prosperity angle, in particular our connection and engagement with SMEs. A number of them are really keen to help us tackle that problem. That is an important aspect of how we think we are going to access the talent that we need to get the job done that we need to do.

Q87 **Nick Smith:** That is great. I am going to ask you two more difficult questions. I am sorry, but they do need to be put. The NAO said that the Department's locations are not ideal for hiring talent, with around 60% of defence digital jobs based in Corsham. What are you doing to expand digital opportunities across the UK? That must be a problem. That must be a pinch point. Is Corsham the right place to base your offer?

Charlie Forte: It is a problem. We have saturated the Corsham catchment area. There are two things we are doing. We have already started doing one of those. Again, this was a catalyst through Covid. We have a number



of people that we have recruited who have a remote base and who come part week to join teams. That is increasing. We have to make sure that we are doing that appropriately and make that make that work.

Secondly, in partnership with other parts of Government, we are looking at different locations around the UK. We could go off and do that on our own, but we believe it is better to do that in partnership with some of the other parts of Government that are already looking at that.

Q88 Nick Smith: I am not convinced. Are you in the right place? Should you move? Do you need a bit of time?

Charlie Forte: Corsham is still relevant for what we need to do. On top of everything else, it would be a pretty big challenge to lift it and shift it or spread it. That would only be something you could do over a number of years. We have to think about continuity as well. I would rather acknowledge your appropriate challenge and answer your question by saying that this is an “and” conversation. We need to look at other locations.

Laurence Lee: We are really alive to that opportunity. I would just gloss what Mr Forte has said in this way: our capacity to work in a more hybrid way plays into this conversation. You heard earlier about our expectation that digital talent will come into defence for a few years, then maybe go into industry or academia, and we hope we will bring them back again.

We are seeing in our recruitment that the offer of a hybrid way of working is very attractive, particularly to graduates. They are very interested in that. The review we will conduct will certainly look at other geographic options. Other partners across Government, for example, have moved to Manchester. That is one place where there is a different pipeline of digital skills. We are thinking about it.

Q89 Nick Smith: As long as you are on it, because from where we are sitting, things are not right. Mr Forte, you are a trailblazer. It takes 200 days to clear developed vetting security status for a lot of the people who you have recruited into these jobs. Of course, it is an essential part of the employment process. Are we really expecting people to wait over six months to get through this vetting? Is it good enough? What are you going to do?

Charlie Forte: Of course it is not good enough. There is a real challenge. It is still getting worse, not better. Mr Lee might want to comment on some of the influence we are bringing to bear.

Laurence Lee: Yes, it is really challenging. The reason it is really challenging in part is that Government’s broad demand for vetted staff exceeds earlier plans, on which the provision of delivery through the UK—

Q90 Nick Smith: You are the tip of the spear. You really have to get this right. You have to do it sooner rather than later. Waiting six months to employ key personnel cannot be right, can it, Mr Forte?

Charlie Forte: No. I have said that.



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Chair: You are reliant on the Cabinet Office.

Laurence Lee: If I may, I share that frustration. It is important that we work constructively with our colleagues in the Cabinet Office, who are seeking to improve and indeed are improving the machine.

Chair: The National Audit Office is looking at this again.

Laurence Lee: What we are experiencing is that the times are improving, certainly over the summer, month on month. That is good progress. That delay is really going to cause some potential recruits to think, "I will go somewhere else" or, "I will get a different offer". It needs to improve.

Q91 **Nick Smith:** I want to finish off by saying that we have a really good cybersecurity course at the college in Ebbw Vale. If you are looking for new recruits and brilliant people in the future, come to south Wales.

Laurence Lee: That is great advertising.

Chair: Will they move to Corsham?

Q92 **Sir Geoffrey Clifton-Brown:** Are you talking about these problems with our closest international allies, the United States and Australia? Is there some knowledge-sharing as to what is the best practice and the best way to do this?

Laurence Lee: The short answer is yes. I was in the US two weeks ago talking to Pentagon colleagues and Mr Forte's counterpart. They are thinking similarly about a very similar set of problems to us. There is deliberate and tangible collaboration, as there always has been, but certainly in this area.

Q93 **Sir Geoffrey Clifton-Brown:** That is very good. Neither of you, Mr Lee and Mr Williams, quite answered my question about efficiency savings, so I am going to have another go. Paragraph 3.5 says that you want to make efficiency savings of £1.25 billion in a 10-year period. Taking you to paragraph 3.6, a big chunk of that, £695 million, is going to come through strategic supplier management. Is that realistic?

David Williams: Yes.

Laurence Lee: Yes.

Chair: Those were confident yeses.

David Williams: Yes, but Mr Forte is going to deliver it for me.

Q94 **Sir Geoffrey Clifton-Brown:** That is good. Are you going to deliver that, Mr Forte?

Charlie Forte: Yes.

Chair: This is what 38 years' experience brings to the MoD, finally. A lot rests on you, Mr Forte.



Charlie Forte: Very briefly, if you think about what we have talked about in terms of silos and individual ways of doing things, there is an old-fashioned IT economy of scale benefit we are already delivering and there is more to come. It is as simple as that.

Q95 **Sir Geoffrey Clifton-Brown:** While you are on your feet, Mr Forte, I did promise you that I would come back to Morpheus and Ajax. Are we getting to a situation whereby the technology in the individual pieces of equipment you are ordering, which is increasingly sophisticated, is going to be hampered by a lack of digital capability?

Charlie Forte: That is definitely a risk with Morpheus. In the intervention we are making we need to make sure that, when Ajax is delivered with that capability in it, we can share that data and move it across the battlespace and indeed back to other places where it needs to be sorted. We do not have a solution to that yet. That is exactly what we are doing in the intervention we are making in Morpheus.

Tom Copinger-Symes: I would only add that there is a difference between what we are doing and how your phone provider updates your software the whole time. That is tough, but it is a lot tougher when the enemy is trying to stop you doing that or trying to fiddle with the software that is being uploaded. We are on that, too, but, as Mr Lee mentioned, secure by design is a fundamental rule for all of these capabilities.

Q96 **Sir Geoffrey Clifton-Brown:** I was not going to ask this question, but, since you have raised it, I will ask you about the difficulties of upgrading equipment. For example, you might only have a very short space of time to re-patch a new update of the IT on an aircraft carrier. How are you going to improve on that?

Tom Copinger-Symes: A lot of that is about the digital backbone and providing that superhighway to get the data back. There might be threat data that means you need to update that system. You also need to send that software forward to upgrade those systems.

Of course, you can never be absolutely sure that will always work, so you need reversionary modes forward in the battle space for those times when you are disconnected. If you are used to operating on a ship on the wrong side of the cape of whatever, that happens quite regularly. They are very used to reversionary modes.

Q97 **Sir Geoffrey Clifton-Brown:** Mr Lee, figure 8 on page 34 says, in relation to MODNet Evolve, "The IPA recommended that the Department urgently strengthen the programme's technical resource, arguing that if left unresolved, the programme would fail to deliver future secret capabilities and end user services and devices". That sounds like something pretty serious. What are you doing to resolve that?

Chair: That is red-rated, is it not?



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Laurence Lee: Yes, it is red. We take that very seriously, and we have put measures in place to address that. We are hoping this programme will move to amber in 2023.

Sir Geoffrey Clifton-Brown: That is good. We look forward to seeing whether it does.

Laurence Lee: Me too.

Q98 **Sir Geoffrey Clifton-Brown:** I have a final suggestion for you, Mr Williams, which you might like to take away and think about. Given that digital is so important to everything your Department is doing and, as we have heard today, is going to be become increasingly important, why do you not change the title of the Minister for Defence Procurement to the Minister for Defence Procurement and Digital?

Chair: That is a matter for Ministers, is it not?

David Williams: I will happily take that away and consider it, although ministerial titles are not in the gift of the Permanent Secretary

Sir Geoffrey Clifton-Brown: It is just an idea. It could draw to everybody's attention how important it is.

Chair: It is a fraught issue. Once you get landed with one in your first 24 hours, that is it for the rest of your ministerial career.

Thank you very much indeed to our witnesses. We will want to come back to this, of course, in terms of the costs and the money. We have heard the rationale; we have had it very clearly laid out. We can see what the benefits are, but there is many a slip betwixt cup and lip. We know that these things do not always run smoothly, so we are natural cynics on this Committee. We will be holding you to account. We get our next chance for a rematch on 15 December, with the equipment plan. We look forward to seeing, certainly, Mr Williams at that. Thank you to David Williams, Permanent Secretary, Lawrence Lee, Second Permanent Secretary, Charlie Forte, chief digital officer and General Copinger-Symes for your time today.

The transcript of this session will be put up on the website in the next couple of days uncorrected. Thank you to our colleagues at *Hansard* for that. I look forward to seeing you all again soon, as I am sure you look forward to seeing us. Thank you very much.