

Defence Sub-Committee

Oral evidence: Defence Equipment and Support, HC 1099

Wednesday 7 June 2023

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Members present: Mr Mark Francois (Chair); Sarah Atherton; Robert Courts; Richard Drax; Gavin Robinson; Derek Twigg.

Public Account Committee Members present: Sir Geoffrey Clifton-Brown.

Questions 53-131

Witnesses

[I](#): Air Chief Marshal (retired) Sir Stephen Hillier, former Chief of the Air Staff, Ministry of Defence, and Lieutenant General (retired) Sir Mark Poffley, former Deputy Chief of the Defence Staff (Financial and Military Capability), MoD.

[II](#): Herman Claesen, Managing Director of Future Combat Air Systems, BAE Systems plc, and Paul Livingston, Chief Executive, Lockheed Martin UK.

[III](#): Lord Levene, author, Defence Reform 2011.

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]

Examination of witnesses

Witnesses: Air Chief Marshal (retired) Sir Stephen Hillier and Lieutenant General (retired) Sir Mark Poffley.

Q53 Chair: Good morning and welcome to the second evidence session of the House of Commons Defence Committee's Sub-Committee inquiry into Defence Equipment and Support, or DE&S for short, which is the part of the Ministry of Defence that procures the bulk of the equipment for our armed forces. We have two distinguished witnesses with us this morning: Air Chief Marshal (retired) Sir Stephen Hillier and Lieutenant General (retired) Sir Mark Poffley. I will ask them to introduce themselves in a moment. We have three evidence sessions this morning: first, from your good selves; secondly, from representatives of the defence industry; and thirdly, from Lord Peter Levene, who is a former chief of defence procurement.

Sir Stephen, for the record, because you currently hold an important position in the Civil Aviation Authority, you wanted to state that we are drawing on your historical experience from your previous service in the MoD and it is not connected to your current role with the CAA. Having put that on the record, can you introduce yourself to the Committee, please?

Sir Stephen Hillier: Thank you for this opportunity to speak to you on an area that remains of core importance to me and clearly to the defence of the nation. I was the Chief of the Air Staff between 2016 and 2019, so if you like, I was the consumer of the product produced by DE&S. Also, I held the budget and therefore was involved significantly in the procurement of that equipment at each stage. Prior to that role, between 2012 and 2016, I was the deputy Chief of the Defence Staff for military capability. As part of that responsibility, I owned the MoD's equipment programme. I also oversaw the transition from what was at the start of my time a centralised model—where I held the budget and was responsible for the delivery of the equipment programme—through to the delegated operating model, which was introduced as a result of Lord Levene's proposed reforms. At the same time as doing that job, I was also the senior responsible owner for the Carrier Enabled Power Projection capability, so I was on the delivery side as well as the planning side of the equipment programme. Prior to that, I had a number of operational roles, but I also did previous tours in the Ministry of Defence, in defence acquisition, going back to 2005. That included things like the Typhoon programme along the way.

Q54 Chair: So it's fair to say you know a bit about this.

Sir Stephen Hillier: I hope so.

Chair: Thank you very much, sir. Sir Mark.

Sir Mark Poffley: I won't repeat the comments about the role of deputy Chief of the Defence Staff for military capability. That was my last



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appointment in the Ministry of Defence, which I left in 2019. Prior to that, I held a number of appointments in the Army and the Central Staff in the Ministry of Defence and had a reasonable amount of operational experience in most of the places where you can imagine the Army served in the course of the last 10 to 15 years.

I have since been working in the advisory business. I am a director with Universal Defence and Security Solutions and have a number of other appointments as an adviser with defence industry and defence-centred consultancies across Europe.

Chair: Thank you very much. From our side of the table, let me introduce, on my far right, Robert Courts. He is a member of the Committee. Then there is Richard Drax. To my immediate right is Sir Geoffrey Clifton-Brown, who I should explain is the deputy Chair of the Public Accounts Committee. As you will know, it has always had a strong interest in defence procurement, so Geoffrey is guesting with us today to lend strength to our arm. On my immediate left is Masrur, the learned Clerk, who is going to keep us procedurally in order, and then Derek Twigg, Sarah Atherton and Gavin Robinson. So that is our team for today.

Without further ado, now that we have covered all the preliminaries, I will ask Sarah Atherton to lead us off.

Q55 Sarah Atherton: I want to set the scene. I need a new car, so I walk into the showroom, and there it is, under the spotlights. It's an Aston Martin DBX, with free mats, and I want it, but the husband is going to say to me, "It's expensive. There's a waiting list. And there are lots of gadgets on it that you are not going to use and could possibly break"—although we're not saying an Aston Martin DBX is going to break. What do you need your car for? I need it to go around an urban constituency, park easily and put stuff in the back, so I end up with a Fiat 500 Abarth. It does the job—and is a little bit sporty.

You're the customer—the top-level budget holders. The primes are the dealership. DE&S are the husband. Does DE&S act as a critical friend and a voice of reason?

Sir Stephen Hillier: The short answer is yes. I have been involved in DE&S for a long time and seen it in various guises. I was on the board of DE&S, as a non-executive director, for four years. I think, as an organisation, it fundamentally does the job that we ask it to. It is the case, and certainly was in my time, when I was on that board, that about 80%—I believe it is more than 80%—of the projects and programmes that it is asked to deliver, it does, to performance, cost and time. The remainder, though, are the big ones, the significant ones, the complex ones, the technically risky ones, the long-term programmes, and I'm sure we'll talk more about them.

In terms of your question, "Does DE&S provide support?", fundamentally yes. I think the challenges sit, if you like, before you get to the DE&S part of this. I think what you are saying is, "How do you set your



requirements? What are you actually asking for?", because if you ask for the Aston Martin, as you suggest, and you don't just ask for the Aston Martin but you say, "I'd like some modifications to that Aston Martin," you need to be aware of the risks that you may be incurring: the risk to cost, the risk to time, and so on. The flip side to that argument about whether it is an Aston Martin or a Fiat 500 is that sometimes you need an Aston Martin or a Fiat 500 is that sometimes you need an Aston Martin, so it is not the case that you should go for the Fiat 500 in every case. You need to go into that process knowingly, understand very clearly what you want, understand the performance, cost and time risks of what you are asking for, and use DE&S as your critical friend as part of that, as well as, frankly, engaging with the industry so that you really understand it before you sign up to it.

Sarah Atherton: Sir Mark?

Sir Mark Poffley: I would agree with all of that. There was one word that was used in that point about "need"; I would challenge you as to why you needed an Aston Martin just to cruise around town. It is not necessarily the DE&S that I would ask that question of.

Having said that, I would certainly expect—in my experience this has been the case—to see the DE&S outline it to me when my want was rather trumping the need requirement. I want an Aston Martin—of course I do; why would I not?—but I probably only need a Fiat 500. The issue is whether you are getting proper advice as to the full implications of what you are doing and, indeed, the risks you are carrying, particularly in the context of delivering against the more complicated programmes.

Q56 **Sarah Atherton:** As top-level service budget holders, did you get that advice?

Sir Stephen Hillier: Yes, and you get that advice from many sources. The DE&S will tell you of the practical challenges. There is advice and guidance to be had elsewhere in defence. You can look at international comparators. So they are not the only source of information and advice, but certainly the DE&S would be there to say that what you are asking for is difficult and risky.

I guess, though, the question is: how are all those points of influence and advice racked and stacked? How significant is the taking of the DE&S advice in relation to other advice? Part of that advice might be the threat advice you have—"Here is the problem you have to deal with." I come back to the point: sometimes you have to do risky things because the threat demands it. The challenge is that there is a risk that we treat everything as if it is in that category. Most of the things we do are not in that category and, actually, we could probably go for simpler solutions.

Sir Mark Poffley: I would go a bit further and say that your question presumes that everybody has full visibility of all the issues that pertain to a particular programme. It also assumes that everybody is good at what they do and that they have the right skills associated with that. That is not



unique to the DE&S, because the DE&S is but one part of the ecosystem. The factors playing against the ability of the DE&S to deliver what it is asked to deliver are sometimes outwith its control.

- Q57 **Sarah Atherton:** I am trying to think of a current procurement process that has gone stale around the concept stage. I am thinking of the medium-lift helicopter—the Puma replacement. Is there any reason why procurement projects like that suddenly go off radar?

Sir Stephen Hillier: To be honest, I am not familiar with that particular project; it is after my time so I don't think I could comment on that one specifically. We could speak generically of programmes where it can be pretty clear what the frontline command—*[Interruption.]*

Chair: We will suspend for a moment.

Sitting suspended.

On resuming—

Chair: We had a slight technical hitch, but we are back online. I think we were in the middle of a question about the medium support helicopter programme.

Sir Stephen Hillier: I cannot speak to it directly—Mark may have more current information than me—but the general sense, if I look around, is that quite a lot of medium support helicopters are available. The question is whether we get something that is pretty much off the shelf, or whether we put together a set of requirements that we find does not match what is actually there, and we therefore conclude that we should build a new design and a new helicopter. That is a critical part of the process, because if you decide to build something new and bespoke you are introducing a series of risks. Sometimes those risks are absolutely ones that you will have to deal with because those requirements might be very particular and you need this capability, but sometimes they are not, and all you are doing is making it more likely that this will take longer and cost more than you originally expected, to end up with a product that is pretty much comparable to other things that are out there.

Sir Mark Poffley: Without going into the specifics of that particular programme, because I think that it would be inappropriate to do so, the requirement has changed. Our view of why we would want rotary on the modern battlefield in the way that we had previously has changed. Indeed, we are considering very carefully, I suspect across the UK defence ambition, what force structure is most appropriate to meet the policy ambitions that have been set. I think that you will find that you will end up with a requirement set against a budget, set against the contemporary need, all being challenged. Before one enters into a big investment programme like that, the Department in particular is getting better at asking those difficult questions. It has not resolved them, and I do not think that many people could give you a straight answer at the moment about what a requirement like that would evolve to, but it is overly



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ambitious to think that you would get certainty on a requirement such as that at a time such as we are in.

- Q58 **Robert Courts:** Following up on that, isn't the point about evolving requirement at the heart of the issue? If we follow the analogy that Sarah has been using, you can make up your mind about whether you want an Aston Martin or a Fiat 500. Provided you stick to that, you have just taken a decision over capability, but doesn't the issue arise if, having ordered a Fiat 500, I suddenly decide that I want an Aston Martin after all, or even worse that I want to amend the Fiat 500 so that it can carry more luggage, or whatever it is? Isn't that changing spec at the heart of this, rather than the failure to take a position?

Sir Mark Poffley: Yes, and I suspect that we may come on to how you form requirements, and whether they are appropriate or not. You have to accept that your requirement is going to change over time, because the opposition are always going to go asymmetric on whatever you field. Therefore, you are going to want to adapt to the opponent's posture. That is going to force you into something.

There is another thing to think through very carefully. Let's take our medium-lift helicopter as an example. It is but one part of the force structure. Therefore, some of the tasks that you may have assigned it may now be able to be done in a different way, or indeed may no longer be appropriate. Those are the sorts of calculations that are going to affect the setting of that requirement. I may want both. In a perfect world, I want both a Fiat 500 and—I am stretching this to the point of absurdity, perhaps—an Aston Martin, but there is a balance to be struck between affordability and a whole raft of other factors that are going to play into that.

- Q59 **Robert Courts:** Are we not getting to the stage at which the bracket between ordering and delivery is getting so long that evolution in capability is happening so many times, and the project is continually being pushed to the right, costing more, and you end up with fewer overall?

Sir Mark Poffley: As the geopolitical situation becomes ever more dynamic and unstable, so that prospect accelerates, because, by and large, the UK defence budget is a cash-limited enterprise.

- Q60 **Robert Courts:** Sure, but that will always be the case. It will always be the case that capability needs evolve and the opposition will evolve. Doesn't there have to come a point where you have to get the procurement cycle to a short enough period that you get something delivered at reasonable cost and then upgrade it later, maybe? Otherwise, you are simply in a constant doom loop of never delivering anything.

Sir Mark Poffley: It follows naturally that you would want to design in some agility to your procurement system, to allow you to accommodate that dynamic, because the pedigree of history over the course of the last 50 years has shown that to be true.



- Q61 Richard Drax:** Sir Mark, this is just a quick one. Take tanks, for example. I am an ex-soldier myself, and we obviously had a lot of tanks in my day. Then everyone said that there was no need for a tank. Now we have the Ukraine war, they are asking for tanks, and tanks are proving quite effective. Yes, they are vulnerable to modern missiles and so forth, but they are still useful for holding ground and taking on the enemy at some distance.

You talk about the enemy evolving to counter whatever we have. Is another risk to procurement going away from the basic platforms to try and evolve from them, and then having to come back to the platform we just got rid of, because we suddenly realise, "Oh, dear, we do need an aeroplane and we do need it manned. We do need a ship. We do need a tank. We do need this and we do need that"? Getting the procurement right is difficult, and perhaps it is better if we stick to the basics and adapt them rather than—

Sir Mark Poffley: That is certainly an approach you could take, which is that you are always going to provision for a non-discretionary conflict, and this country has not been involved in a non-discretionary conflict for some considerable time. You are then into the business of asking, "Do you design for a discretionary or a non-discretionary structure?" They produce very different solutions. A non-discretionary structure, which indeed has been very much the design philosophy for much of the Army, for a whole raft of reasons—budget, political ambition, and so on—has led you to a position where, by and large, the structure is designed for non-discretionary interventions of choice. That means that you don't have to have everything, so you take greater risk on those other capabilities.

Over time, the experience has shown us that by the time you really want to change your mind on this, it is probably too late, because the big capital decisions that you are taking here require you to have strategic foresight running into about 10 years.

- Q62 Richard Drax:** Does this not remind us of the mistake that we made before the second world war, where we just disarmed? Thank God we had a huge Navy. We made the same mistake then. In a sense, I understand what you are saying about discretionary and non-discretionary wars; we have selected the wars that we fight. We have not been dragged into a war, which potentially we could be with a country like Russia, for example.

Sir Mark Poffley: Yes, I think there is some societal conditioning around: are you really looking at your risk register in the right way? The national risk registers have been challenged over the last few years to see whether we were prepared to pay for the mitigations, whether it is global supply chains, covid or the Ukraine conflict. You are seeing that sort of thing challenged.

When it comes to setting a requirement for defence, in particular, you have to look very carefully at whether you are prepared to accept the risk of leaning out certain capabilities for those non-discretionary wars. I think this country has taken risk on some of those things, frankly.



Q63 Chair: We might come back to that. Sir Stephen, is there anything that you wanted to chip in on those last two or three good points?

Sir Stephen Hillier: Yes. If I can just pick up on that point, I am going to slightly misquote this, I am sure, but it was written into a defence review—I think it was actually a DE&S acquisition review in about 2005. It said that what we should aim for is agile, multi-role capabilities which have the flexibility to evolve as the strategic environment inevitably changes. The “inevitably changes” part is important, as is the “agile, multi-role” part. That’s the sweet spot we are trying to do. We are not saying, “We have seen the future of conflict; it looks like this, and we will acquire accordingly”, but, “We need to be able to spread our bets in our acquisition”. That comes on to the requirements, if I might.

On the requirements side, there is a risk that we treat requirements as a generic across every aspect of defence acquisition. Sometimes, setting fixed requirements is not helpful. If you are talking about information systems, for example, by the time you have set the requirement, it will have evolved and it will be past you, so we need to have a more flexible approach. In other areas, we need to be pretty rigid in setting the requirements because we are setting something for decades into the future, as Mark mentioned.

For me, what we struggle to do is understand which is which. We have to make sure that we look at requirements rigorously, that we take the most senior ownership of requirements, and that we maintain the discipline in those requirements, because quite often they start off there and then they get ramped up over time. Maintaining that configuration control is really important, and every time we either institute a requirement or change a requirement, we need to have a rigorous analysis that says, “What are the consequences in terms of costs and time?” Yes, there will presumably be a performance benefit, but is it worth it in terms of frontline capability?

I know it has been said previously to the Committee, and it may or may not be the same example, but I have had this quoted to me by defence industry, saying, “Well, this is being asked for by Defence in the requirements, and we don’t think it’s within the laws of physics, but we are going to give it a go.” That is really concerning. It is that sort of senior ownership, because that is not what Defence wants, and it is not what the front line wants. It wants something that it can operate at the time expected for the cost expected. We need to iterate round that process more quickly than we do, because we don’t value time enough in the requirement setting, and in fact across the whole piece.

Q64 Derek Twigg: In getting more into the detail of the process and in setting the requirements for equipment, how do the individual services create those requirements and make sure they are deliverable? What is the process—not what is nice to be, but what happens now? How does that work?

Sir Stephen Hillier: I would caveat this. It is nearly four years since I was a chief, so I can’t say what happens now, but I can describe—

Derek Twigg: I don't think things have changed massively.

Sir Stephen Hillier: Probably not. It is a truism when people say that at least half the cost and time risk in a project is introduced in about the first 10 minutes of you thinking of it. There is that—where do you start? It's an idea. Those ideas are not plucked out of the air—

Q65 **Derek Twigg:** Do you have an example you could give, without giving anything away that is official?

Sir Stephen Hillier: Can I come back to you on that one?

Derek Twigg: Okay.

Sir Stephen Hillier: It is not a question of, as service chief, looking around and saying, "That would be nice to have." You are generally looking at continuity of capability, so it might be combat air capability. You say, "We have it at the moment, and we need to ensure we can continue to deliver it in the future." You look at where the threat is evolving to and who are your potential adversaries. You bring that into the equation. You look at what your allies are doing and you bring that into the equation, because most of these are international collaborative programmes. You have the discussion to find out what industry might be thinking—is this practically deliverable? You look at, clearly, the potential budgets.

You bring all those factors into the equation. That, eventually, has to result in a set of headline requirements—what you are after. At that point, you reach the critical phase. When you start to say, "I want to go this fast, I want to go this distance, I want to carry this weapon load and I want this level of technical capability," that is the key decision making point. You can go for the top end, and sometimes that will be required, but you need to do that knowingly and have the data to support the risks that you are now taking on. Defence then needs to be really clear. It can't just be the single service chief bringing this to the table; the whole of Defence needs to realise the risk that it is taking on, because eventually Defence is going to bear the burden of that. Is that helpful?

Q66 **Derek Twigg:** It helps. I will come back. Let us turn to Mark.

Sir Mark Poffley: I think the process has been outlined well there. I would say to you that I do not know anybody who sets out off on the journey of writing a requirement who is looking to do that in a cavalier fashion. In fact, the reverse is true: people are overly cautious and ambitious about setting a requirement that is very specifically for their need. The Ministry of Defence, about four or five years ago now, established a joint requirements oversight committee that was to get after where compromise, if you could afford it in a specification requirement, could be made. That, by and large, was to get after the issue associated with earned value: if you are going to spend x pounds more, what do you actually get in capability terms for that additional benefit? If a submarine is to go at a particular speed—let's say, for the purposes of illustration, 10 knots—and you want to go at 11 knots, how much more is that going to cost you? That then allows you to apply back into the system the risks that



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you are carrying against the scenarios in which you think you want it to go at 11 rather than 10. That sort of process is where it is a maturing consciousness in the requirement setting to say, "The oversight is now coming from a whole raft of other folk, beyond the parochial interests of the capability owner, to confirm whether that is worth it."

Q67 Derek Twigg: Are you saying that there is a case for more rigid requirements?

Sir Mark Poffley: I think the case is certainly there for what I would describe as appropriate scrutiny of the requirement to ensure that it is only as specific as it needs to be. There are some areas where you need very clear point reference specifications and others where, frankly, it is better, from the point of view of modification downstream and to give industry a sporting chance at hitting the mark on some of these things, that you have a broader envelope of ambition. At the point when you get to thousands of points of specification, quite clearly, if any one of those fails, your programme is in trouble. That is the sort of issue that I think is becoming better thought through in the Department more generally.

Q68 Derek Twigg: What about advances in technology? How do you keep abreast of that? What is the process? If you started something 10 years ago, did you think, "What will the world look like 10 years later?"?

Sir Mark Poffley: It is obviously the case that certain technologies are refreshing at a far faster rate than others. The system is grappling at the moment with how best to accommodate the scrutiny and, indeed, the assessment of those high refresh rate technologies. That leads you to the conclusion that, wherever you can, you design with an open architecture that ensures that you can accommodate refreshes on a regular basis.

Q69 Derek Twigg: Why has that not happened in the past? This open architecture has not been at the forefront when we develop. Is it down to cost?

Sir Mark Poffley: It is partly about cost, and it is partly about how you achieve standardisation. Company A and company B are quite clearly going to want some bespoke IP and are nervous about anything that might compromise it. This is where there is a bigger discussion about how you generate the volumes of equipment that allow you to produce a commercial solution that can accommodate that sort of approach. That is possibly an export-based approach that says, "I'm going to allow open architectures that will allow subsystems to be the discriminator in scale and sophistication, rather than the platforms themselves."

Chair: To follow up on that, the deputy Chairman of the Public Accounts Committee, Sir Geoffrey Clifton-Brown.

Sir Geoffrey Clifton-Brown: Chairman, thank you, and may I thank you for allowing me to be a guest on this important inquiry?

Chair: Delighted to have you.

Q70 Sir Geoffrey Clifton-Brown: Mr Twigg's question—we call everyone by



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their surname on the Public Accounts Committee; I don't know whether you do—allows me to segue beautifully into mine. The NAO Report of October last year said, "The government's Integrated Review placed greater priority on identifying and deploying new technologies faster than potential adversaries to enable operations across all arenas of warfare and collaborate better with partners. Cyberspace is itself also becoming an increasingly important arena of warfare." If Ukraine is teaching us anything, it is that our digital communications on and off the battlefield—faster than our opponent—are becoming a crucial component of a wide range of equipment. Is our defence procurement up to that rapid technological change?

Sir Mark Poffley: It certainly is aware of that challenge, which predates the Ukraine conflict. There are dangers, incidentally, in drawing too many conclusions from one specific operation. I think we are at the foothills of genuinely understanding what the real impact of Ukraine would be, so I am slightly cautious about referencing Ukraine specifically. That said, the digital agenda in particular is one that has been around for some years, and the establishment of Defence Digital as a bespoke community of interest with the right specialisms to be able to bring some consistency of approach across the Department has been a step forward in that. How do you accommodate the short-term acquisition processes? I think that is still work in progress. Again, you are dealing with an ecosystem rather than one specific silo of activity. The full impact of producing a system that is different from the standard has, in my view, yet to be realised or understood as well as it might be across the whole of the procurement system, not just inside the Government.

Sir Stephen Hillier: I support Mark's point: we must learn the lessons of Ukraine, but it does not set the scene for every possible conflict in the future.

One aspect of this in relation to acquisition is that it demonstrates very clearly in those technologies that defence should be humble enough to recognise that it is not always in the lead any more. In fact, the lead is elsewhere. The most substantial investment and the R&D is elsewhere. There is a tendency in defence, and clearly I was part of it for many years, to look at these challenges and say, "Here is the challenge now. Let us set out a range of requirements for this thing that we need in this new technology space, because that is the way we do business." What Ukraine has shown us is that you take a commercial product, you militarise it and you adapt the way you fight to the equipment you have from other sectors. That is a very powerful lesson, and we should have enough humility not to think that we are so special in defence that in every case we have to design something new because we are the special set of needs. We will not be agile and fast enough if we take that philosophy.

Sir Mark Poffley: Can I modify slightly what I said about Ukraine? I think Ukraine has acted as a defibrillator to wake us up to the realities of some of the things that we were talking about a moment ago—about the lead times for your decision making here, and about what you think "good" looks like in terms of your structure and your capability mix. There are



some things that you will simply be behind the curve on if you do not take a decision now. Those non-discretionary wars and interventions, quite clearly, are the things that you should provision for because, by definition, you do not have a choice.

- Q71 Sir Geoffrey Clifton-Brown:** We have heard on the Public Accounts Committee of a shortage of digital skills right across Government. Indeed, the MoD last year was way short of its targets. It only recruited 42 out of the 151 digital posts it wanted. Are we in a serious situation where, because of a shortage of digital skills, we are not procuring quickly enough some of the most important digital platforms that we need, such as Crowsnest or Morpheus? We have heard on the Public Accounts Committee about Morpheus and, for example, that Bowman is the limiting factor to the technical capability of Ajax, so we desperately need Morpheus. We have also heard that some of our adversaries are procuring these digital requirements quicker than we are. Don't we have a serious problem here?

Sir Mark Poffley: I think it is true that if you have the right skills, particularly in a specialist area such as digital, you stand a better chance of getting your procurement system to be responsive. It would be dangerous to conclude that programmes such as Morpheus are purely down to a lack of knowledge about digital or the skills associated with it. Are there sectors where there are skills shortages? Definitely, but I do not think that is unique to defence. I think that is a common problem that many parts of the country, and indeed the international community, are struggling with as to how you keep up with the refresh rate that we are now seeing particularly in that sector.

- Q72 Chair:** We may return to Morpheus later, because it is a programme that the Committee is particularly concerned about. Sir Mark, you mentioned the joint requirements oversight committee. I will pause on that for a moment. We have had about 40 pieces of written evidence submitted to this inquiry, some of which have been very good. A consistent theme is that very often when programmes go wrong, they go wrong very early on. Not being clear in your requirements about what you really want—or, even worse, changing your mind about what you want—is the reason why a lot of programmes get into serious trouble. In simple terms, is that analysis broadly correct?

Sir Mark Poffley: My instinct is yes, but I come back to the point that Sir Stephen mentioned earlier: the vast majority of programmes going through the DE&S are actually going through. The bigger ones, which are very complicated, which have strategic significance and which inevitably carry both fiscal and technical risks, merit greater scrutiny on the requirement, I believe, and in some cases the simplification of it.

- Q73 Chair:** I will come to Sir Stephen in a moment. We have looked at the French way of doing this. We have had a private briefing on how the DGA, which is the French equivalent of our DE&S, operates. One of the things that seems to be different in the French model is that the procurement people are in the room when the requirement is born, as it



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were, whereas very often DE&S is told to go and procure something after a lot of the critical decisions have been taken. As I understand it, DE&S does not have a seat at the table on the joint requirements oversight committee at the moment, but consideration is being given to that. It would seem quite a sensible thing to do, would it not?

Sir Mark Poffley: In my experience of that committee, yes, it would be a very useful thing to do. I would point out that the committee below that—the military capability board—does have the DE&S present, feeds the joint requirements oversight committee and does have representation from the DE&S.

Q74 **Chair:** Yes, but just to save time, that other committee you mentioned—this all sounds terribly British, with one committee and then another—is further down the food chain.

Sir Mark Poffley: Yes.

Sir Stephen Hillier: Perhaps I can come in here? I claim authorship—I set up the joint requirements oversight committee in, I think, 2014. The goal of that was to drive greater discipline in the customer community and to ask those questions at the requirement stage. I also sat on the investment approvals committee, and I got the sense that by the time it came to that committee, which had the Chief of Defence Matériel sitting on it, the requirements were almost being treated as solid, as if they could never be changed. I did not feel that there was enough scrutiny prior to the IAC. On your point about whether the military capabilities board is sufficiently senior, the senior thing is the investment approvals committee, and that is where the complementarity lies.

Is the joint requirements oversight committee successful? My experience of it finished in 2016 when I moved on to other things, but it was getting there. The example I have in mind is that I recall an information system being brought to the committee that was going to cost a considerable amount of money, and it seemed to me that it replicated what was available in the commercial sector. That was the challenge: why do we not buy something in the commercial sector, with a minimal modification for specific military needs, rather than designing something from the start? I think we got there, but it was quite painful because for a lot of people it was in their DNA to think, “We are Defence—we are so special that we need to set our own requirements and have our own project at each stage.”

In terms of comparison with other nations, every nation has a different way of doing it. There is no exemplar out there, which is not to criticise the DGA approach. There are advantages and disadvantages across the board. As for the DE&S—certainly in my time, but still—other nations come to see how we do it, so there is definitely something there. It is not a cheap point to make that complex French programmes are subject to similar delays, caused by economic factors, changing requirements, production difficulties and so on. It is common knowledge that Rafale was five years late on its in-service date, for example. It is not, “There is a



perfect example out there—why don't we adopt it?", but that is not to say that we cannot give ourselves a better chance of success than we do at the moment. I think there are paths to giving ourselves a better chance of success.

Chair: Sir Stephen, we are in the middle of an inquiry, so we have not come to any conclusions yet, but one thing we have already learned is that our procurement system has a very large number of committees in it. We had to form a Sub-Committee of our own to find that out. At the end of the day, without pre-empting the inquiry, there may be an argument for some rationalisation in all of this.

- Q75 **Gavin Robinson:** Good morning. Sir Stephen, you have mentioned humility and the need for the MoD to be a little humbler in aspiration and perhaps not pursue the most technologically advanced and expensive items. Can I ask both of you, separately, to share examples of where there has been an operational or capability gap because of delays in procurement?

Sir Stephen Hillier: I will try to think of a specific example, but I could describe the general challenge as a frontline commander. If there is new capability equipment coming through the pipeline, generally it is a replacement for, or an enhancement of, what you have at the moment. The way it has to work, from the people dimension if nothing else, is that you have to start to run down your existing capability in order to redeploy assets and people to run up the new capability, so you are in a decline on an assumption. If it then happens that the new capability gets delayed, you are not going to be able to reconstitute that existing capability. You now have either a capability gap or less capability than you need.

That is a serious problem, particularly when you are heavily engaged in operations at the time. It also costs, because you are running on that old equipment and all the contracts and support for it are due to run out, so you have to go back to suppliers and ask to keep it going. That results in unexpected costs along the way. At times it is not good for morale, because people want this new capability and equipment, and that causes frustration in their minds as well.

- Q76 **Gavin Robinson:** That is a great theoretical observation, but do you have practical examples—aerial surveillance or AWACS might be a good example, but there may be others—where you can see clearly and definitively that there have been operational gaps because of procurement delays?

Sir Stephen Hillier: I am aware, but only through the media, of where the airborne early warning—the E-3 into E-7—is. I am not close to that debate, but I can understand the issue.

Chair: Take it from us: it is not in good shape.

Sir Stephen Hillier: What I am familiar with is the maritime patrol aircraft example from 2010 through to 2015, where we consciously took a capability gap, because of a failing equipment programme, with an eye to



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recovering later on. That was a clear and apparent gap in defence capability, and it took a lot of effort to protect particularly the people dimension, so that we could recreate that capability.

I would say that in recreating it from 2015 onwards, we took a very disciplined approach. We bought an off-the-shelf product, by and large, and were absolutely rigorous in making sure that we did not try to adapt it for specific needs. We got the nine aircraft in service, as far as I am aware, on budget and on time. There are some potential lessons to be learned there. I hope that that gets to your question.

Q77 Gavin Robinson: Sir Mark, I am keen to hear your response to that, but first I want to broaden this out a bit. I am a Belfast man, so I want to draw on two Belfast examples. Last Monday, I was on a tour of HMS Caroline. HMS Caroline was built in 1913 and was in service in 1914. It was the last of its class and a survivor of the battle of Jutland, and it was built in 11 months. There was a need and there was a quick industrial response, and it stayed in service until 2011. That is extraordinary.

As frontline commanders—this is to Sir Mark particularly, since you have not spoken in response to my first question—would you prefer to have immediate capability, even if it is less than what the initial aspiration may have been, or would you rather wait without the capability until you get the shiny, bright product at the end?

Sir Mark Poffley: Again, how you think about this depends on your service and your appetite for risk. If you are prepared to accept some risk, the 80% solution is the right one now, because you have it in your hands. There is a dynamic at play here, which is the lateness of the committal of the Army's programme relative to the other services because they tend to be less long-term capital programmes. That is not true of the armoured fleet, but it is certainly the case elsewhere.

Choices will be reflective of your ambition. If your budget is constrained, you will inevitably make choices that may mean that you are accepting a compromise in the standard to have it in a timely fashion, but obviously there are some very complicated programmes where, frankly, you will then take the dynamic we have just been discussing around a capability gap that is punitive. That is fine when you are in a time of discretionary conflicts, but not in a period of non-discretionary conflicts.

Q78 Gavin Robinson: How do you think we as a Committee should consider the fact that these decisions are based on planning assumptions, and sometimes those assumptions are wrong? Ukraine has been mentioned as an example, but I will give another Belfast reflection.

NLAW is built in my constituency. NLAW was discontinued 10 years ago because its utility was questioned, it was too short-range and there would not be urban environments in which it would have any effective use, and now we are scrabbling around trying to retrofit a discontinued production line.

At the base of all the questions and challenges of constrained budgets and how we do things effectively, there are assumptions, and as that



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example shows, those assumptions are often sadly misplaced. When we think of exquisite procurement and the aspiration to have the shiniest, best and most technologically advanced equipment, are we continually pursuing a false goal?

Sir Mark Poffley: There is a risk in following to one end or the other. If you go to more utilitarian versus high-end, you are going to find that you quickly become an irrelevant force in a similar way. The trick here—it is a much overused phrase—is to find some construct which produces you a balanced structure that allows you to apply high-end capabilities in a timely fashion, but you are not burning them out doing constabulary operations and you are certainly not denying yourself the ability to export, because you have classified them too far in terms of sovereign advantage and operational advantage. Those sorts of things apply.

My instinct is that you definitely need a mix. The defence industrial strategy leads you quickly to a position where you will have greater opportunity to generate the volume of sales that industry will need to make products like NLAW and others very obviously competitive for a domestic marketplace, as well as an international one. My instinct is that we have not got that balance quite right at the moment in some areas. That is an ongoing discussion inside the Department, as I understand it, but I am not privy to the detail of it.

Sir Stephen Hillier: Can I just pick up the point about planning assumptions? In a way, planning assumptions will always be wrong, because you are not able to forecast where the world is going to go. What you need to make sure is that the planning assumptions are sufficiently realistic and are grounded in sensible, practical reality. The worst planning assumptions are the ones that you make because they fit with the financial profile that you wish to achieve. That leads you to do things like assuming a length of conflict that is quite narrow. You therefore reduce things like weapon stockpiles, and you are immediately taken apart by something that stretches on for a significant period of time. You have to make some assumptions; they just need to be sufficiently realistic to cater for the recognition that inevitably the conflicts you face will not be exactly the ones that you planned for.

Q79 **Gavin Robinson:** I think you are right about realistic assumptions, but how easy is it for procurement and equipment plans to pivot when the assumptions continually change at a strategic level? In the eight years I have been on this Committee, there have been five or six separate revising plans, from the SDSR to the modernising defence programme, the national security and capability review, the refresh, the IR and all the rest, and every time you are looking for a procurement and equipment list that is sufficiently agile to respond.

Sir Stephen Hillier: I come back to the point that what you are trying to do is procure longer-term items of equipment that can adapt and are sufficiently agile to respond. For others, like information systems, you can have a much shorter notice and be much quicker in responding to the changes that you have discussed.



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Another aspect of this, in terms of ensuring you get that stability, is the annularity question, which is really significant. These really big programmes might last for 10 years, and if every single year you have to land the budget on the sixpence of what you forecast at the beginning of the year, or otherwise lose the money, that is really difficult and it is not an efficient way to do business.

Clearly there needs to be control—you can't just say, "In the next 10 years, do what you wish," because that wouldn't be sensible either. If we can set some sort of margin so that projects can manage on a multi-year basis, that would help a lot. It would ensure that DE&S, which has great people doing a really important job, is not consumed by looking at the money all the time and working out whether by 31 March it can get it down to a certain amount because another year starts on 1 April. Giving it more capacity to manage the programme as a whole would be a really good idea.

- Q80 **Chair:** Sir Stephen, you make a very important point. A number of people—not just DE&S, in fairness—have raised this annularity question with us. As you say, there must be some financial control for the sake of the taxpayer, but is your advice to us that some greater flexibility around annularity would make for better procurement?

Sir Stephen Hillier: Yes, because you would give the DE&S planners greater certainty and greater capacity to do things other than just trying to land the cash. Defence industry colleagues will be able to comment more on this, but giving greater certainty to industry, which works on a multi-year basis, would be helpful and might encourage it to make greater investment in specific areas.

Chair: Sir Mark, you are nodding eagerly. Do you want to reinforce that?

Sir Mark Poffley: Yes, and I would go one further. I would say that the colour of the money is also important. Is it a distribution of CDEL versus RDEL? The capital versus cash debate has frequently bubbled up as something that has constrained people's thinking. The ability to play tunes fiscally is important, although I recognise for all the reasons we have just discussed why people will be nervous about that, so we need to put the right control measures in place to allow that to happen. I absolutely endorse that.

From an industrial point of view, it is interesting. You talked earlier about the DGA; its requirements are much more driven by industry than by their military.

Chair: We will take evidence from industry very shortly, and I am sure that they will have a view that we will be eager to hear. I suspect that they will not disagree with you much on that.

- Q81 **Robert Courts:** I am thinking about how you square the circle of dealing with smaller numbers of exquisite kit and not having the mass, but maintaining the peer capacity we talked about. For cost reasons, of course, we would prefer not to run mixed fleets of tanks or aircraft, but



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do we perhaps have to consider doing that? You have a small amount of high-end capability that provides the peer capacity that you need, and then you buy off the shelf commercially to give yourself mass—is that a way to do it?

Sir Mark Poffley: You need to find some mechanism by which you can reintroduce mass to the structure. Quite clearly, if you don't, you become ever smaller and very quickly irrelevant, because people either go round you or you cannot afford to lose things—there is a raft of different reasons. How you make that difference goes to the very heart of how you construct the architecture of those platforms. Can they be scaled up and down in technology to allow you to deliver a more sophisticated solution that gives you the operational advantage—and, by the way, accommodates quite a lot of sovereign advantage, too? Or do you accept that you have to have two different types of platforms?

If you accept in all environments that the platform merely moves sub-systems around, you stand a chance of actually getting after that sort of problem, because it is the sub-system that, in many cases, discriminates between a utilitarian platform capability and a more sophisticated one. It would be wrong to generalise—there are some capabilities where you need very bespoke, high-end capability, and everything has to be integrated accordingly—but much of the structure can accommodate a far more flexible, philosophical approach to how you think about the types of platforms and capabilities you need.

Q82 **Robert Courts:** To go back to Derek Twigg's question, does technology give us an opportunity that we have not had before?

Sir Mark Poffley: It comes back to the fact that there is one real elephant in the room: your ability to integrate. The integration cost, particularly for the more sophisticated platforms, drives quite a lot of the problems in this area. This is a sweeping generalisation and a philosophical debate, but we need to think through how you accommodate it. The Type 31 is a very interesting example of how you might have a more utilitarian platform, but provided you have the right architecture inside it, you might be able to scale it, in technology terms, for an export market as well as domestic use.

Sir Stephen Hillier: I don't like the description "exquisite"—it has been used for quite a long time—and never have done, because it implies just over-specing, but as Mark said, sometimes you need this kit. If we take the world as we see it, offering our people who are going into combat kit of a lower standard than their adversaries' kit is not a good way forward—and just look at what our potential adversaries are doing.

I think we have just accepted that you can have either high-spec kit or mass. Why not set ourselves the challenge of having both? If we look at information, even just in our domestic lives, we get a level of capability these days that is far in excess of what we previously had, and, in relative terms, it is cheaper than it was. Why are we not, in defence, able in certain areas to have both the high-end spec and mass? That is the



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challenge we should set ourselves. We should not just say, "You've got to make an invidious choice here."

Chair: We are a little tight for time, but let us hear from Mr Drax.

- Q83 **Richard Drax:** Gentlemen, comments on your experience of the urgent operational requirements system would be useful. Should we make greater use of that process? I suspect I know what you will say, but we have many examples—not least from the Falklands war and the war in Afghanistan—of where kit was required and bits were needed for aeroplanes, and it was all done very quickly and efficiently and, on the whole, worked. First of all, Sir Stephen, what is your experience, and should we make better use of that process?

Sir Stephen Hillier: My experience is simply positive. It is something that is subject to a lot of external audit. The NAO is not renowned for complimenting the MoD on how well it does equipment procurement, sometimes for good reason. Back in 2012 it did a report that complimented the UOR process, and it essentially said, "Do more of that."

The irony is that the UOR process is run by the same people who are running the main equipment programme, and it essentially runs through the same processes as well. You have to ask what is different in that. What is different is that the incentive is on time, and it is about taking things that exist and adapting them for the need of the moment. Time is prized as the most important thing. Everybody is incentivised by it. They realise that there is a frontline need, and people do what is necessary to meet that. That is not just in the DE&S. It is also on the requirement-setting side and in industry. Dare I say, it is also in the scrutiny and approvals process, which can add a lot of time to the normal equipment programme. That is similarly incentivised to get the equipment to the frontline now.

If we had more of the philosophy of there being an urgent need for the frontline commands to have kit, be it through the UOR process or the main equipment programme—our emphasis should be on how we organise this system to prize time—we would get a lot of benefit across the board.

- Q84 **Richard Drax:** Sir Stephen, I think I can speak for the Committee. We have all listened to evidence. Ships take 10 years. Pilots take nine years to train. Everything seems to take a huge amount of time compared to other countries. I presume one of the reasons for not using this UOR process is health and safety. Obviously there is a risk if you suddenly strap things on to aeroplanes that have not been used before. There is a risk to the pilot and the plane and so on. Is that another reason why these things are not used more?

Sir Stephen Hillier: I think what you get is a better risk calculation. Rather than think of all the reasons why "this could be a problem, so we need to do more work, scrutiny and investigation," people say, "Time is really important here. If we are to proceed, what are the risks?" We are not in the business of risk avoidance here. We are about risk management, whereby you understand the risks, put in place appropriate



mitigations and get on with it. That is a useful philosophy more generally. Risk management, rather than risk aversion, would be helpful.

- Q85 **Richard Drax:** Before I go to Sir Mark, we discovered that it took 11 years for the MoD to realise that the dreaded Ajax vehicle damaged people's ears, because the ear defenders that the civilian people used were different from those that the vehicle had been designed for. That is a classic example of where health and safety did go seriously wrong. That is by the by. Sir Mark, what is your view?

Sir Mark Poffley: My view is leaning to the positive. I say that for the reasons that Sir Stephen has just set out. The time imperative does generate results, and that is very rewarding for the people who are inevitably conducting operations at the time, but you need to be open-eyed about this, because there are some downsides to it. It can produce for you an inadequate support solution for the through-life of that equipment, and it can seduce you into thinking that your fore-structure can survive on the back of UOR-procured equipment. This is most acute in the Army at present, where you have effectively a vehicle fleet that is a legacy or dogs-of-war fleet from Afghanistan or Iraq. That has meant that the budget that the Army has spent has been consumed by equipment that may not be as appropriate for the war you want to fight next. One needs to be open-eyed about it. I think the culture of scrutiny and approval should be embraced, because it avoids duplication of that scrutiny through the system, which often takes time. I absolutely applaud putting the imperative on time, but we need to be realistic about it. In the longer term, it carries risks.

- Q86 **Chair:** Sir Mark, I am reminded of one of Napoleon's lesser known, but I think best, quotes: "You can ask me for anything you like, except time." Sir Stephen, you made the point that it is essentially the same people buying the equipment. In very simple terms, under an urgent operational requirement regime—I think now they call them urgent capability requirements, just for the record, but it is the same thing—there is a premium on time. To use a military phrase that I think you would recognise, there is a sense of urgency. In pub English, you drop all the bureaucracy and you do what needs to be done quickly, because there is an operational imperative behind it.

I think the Committee feels—I want to make sure that we are on the same wavelength as you, because this is a very important point—that while doing everything as if it were a UOR or UCR would be too simple or blanket a solution, there are certainly lessons that we could import from the process, in terms of mindset and trying to do things with a greater sense of urgency and less bureaucracy. Is that a fair summation of your view?

Sir Mark Poffley: Yes, in short, but one needs to be careful here. You may want to examine the cultures producing the levels of trust that over-scrutinise and over-engineer some of these processes, and that is not unique to the Ministry of Defence. This place, and everywhere else that gets engaged in this, creates cultures that sometimes can lead to very

conservative approaches to the decisions we are making. Accountability and responsibility and all those sorts of soft factors start to bite in this area.

Chair: Sir Stephen?

Sir Stephen Hillier: Mark just said accountability is a soft factor; I think it is a hard factor. One risk in reviewing how we do defence acquisition that I have seen over the years is that we go, "Right, something must be done; absolutely. Let's put in a new bit of system, a new bit of process, and a new bit of governance to drive these outcomes that we want." Rather often, that just makes it even more difficult, and you end up with more signatures on any business case put forward, and more layers of bureaucracy. Simplification of a complex problem—we are not saying it is a simple problem—is the goal.

Making time one of those premiums, and really driving individual accountability—so that if a project leader presents the case to the IAC and says, "This is it, and I can deliver this to this performance, cost and time envelope that I have given to you," that individual is personally held responsible—would get you a much sharper approach. At the moment, when things go wrong, because everybody is involved, it tends to be everybody's problem, and that does not really drive accountability.

Q87 **Chair:** Yes, what's the old saying? "Victory has 100 fathers and defeat is an orphan." This is a good segue to our final question. We ask this to all our witnesses, because it helps us to compare apples with apples. If you each had one key suggestion to materially improve defence procurement in the United Kingdom, what would it be?

Sir Stephen Hillier: Value time far more than you do at the moment.

Chair: Thank you very much. That is for all the reasons you have just been explaining, so I will not ask you to elucidate. Sir Mark?

Sir Mark Poffley: I would apply a philosophy that centred around no unnecessary specification and that produced boundaries, both in specification and fiscal terms. That goes to the point about annularity and over-engineering specification—when it is not necessary, that is; that is an important caveat.

Chair: We understand your point.

Sir Mark Poffley: I think those two philosophical approaches might help.

Chair: In that case, unless colleagues have any other pressing questions, I thank you very much on our collective behalf. If I may say so, you have given us excellent evidence this morning. We realise that you are busy people with multiple commitments, so we are extremely grateful. We will try to ensure that much of the good advice you have given us is reflected in our final report. We will take a brief break for a minute or two while we change to our second panel of witnesses.

Examination of witnesses

Witnesses: Herman Claesen and Paul Livingston.

- Q88 **Chair:** Welcome back to our second panel in this Defence Sub-Committee's inquiry into Defence Equipment and Support—DE&S. We have just had a brief change of cast in terms of witnesses, and we now have two representatives from industry.

Gentlemen, thank you for your time this morning. I think you know most of the members of the Committee, so to save time I will not reintroduce them all. If I could ask you to state your name and company and what your responsibilities are within your respective organisations, then we will crack straight into questions.

Paul Livingston: Thank you for the opportunity to come before you today. My name is Paul Livingston. I am the chief executive for Lockheed Martin UK, and I am responsible for all the activities of Lockheed Martin in the United Kingdom.

Herman Claesen: Good morning. My name is Herman Claesen. I work for BAE Systems. I am the managing director of the future combat air system business and am responsible for setting up and delivering the future combat air solutions to the armed forces.

Chair: Thank you very much. Sir Geoffrey Clifton-Brown is the deputy Chairman of the Public Accounts Committee and is guesting with us this morning because the PAC has a long-standing interest in procurement. I ask him to kick us off for this second panel.

- Q89 **Sir Geoffrey Clifton-Brown:** Good morning to both of you. DE&S is part of a larger system. Do you think that other parts of the MoD, including all the multiplicity of committees and so on, make defence procurement more difficult than is necessary?

Paul Livingston: Yes, is the short answer; it absolutely does. In our evidence, we talked about some of the issues around the DE&S process. I know the team at DE&S has actually laudably wrapped industry into how they look at their operating model and how they sharpen that up; I am encouraged by the work that is being done at Abbey Wood on that.

As the previous witnesses talked about, it sits in a wider ecosystem of the requirements development piece, which tends to happen in a stovepipe. You then have the defence acquisition piece and then the pieces of governance that go beyond that. That can take time—I won't try to repeat what the other witnesses said—and can drive cost into the system.

For me, there are a couple of key observations around that. One is that there is not a deadline mentality for the rest of the system. A simple example is when we as industry are asked to bid on a project for the Ministry of Defence, we have an invitation to negotiate or a request for proposal, and it comes with a very strict deadline. It says, "By this day, on this hour, if you don't arrive at the back of the gates of Abbey Wood"—or

whichever procurement piece is doing it—and hand us the boxes containing your proposal, you are not allowed to do it.”

While you could finesse a solution or finesse your terms and conditions forever, what you actually have to do with industry is go, “Right, the bid’s due in tomorrow. This is as good as it is going to get. Are we going to approve it?” and it goes out the door. There is no choice in that. The rest of that process that goes on until somebody gets awarded a contract does not operate to that deadline mentality or mindset. For me, that would be a key improvement that could be made.

- Q90 **Chair:** Are you saying, in essence, that the customer—in this case, DE&S—imposes disciplines on you as contractors that it does not necessarily impose on itself?

Paul Livingston: I think Sir Stephen made the point about, “What is your priority?” When we are putting a bid in, time is our priority, as well as trying to come up with a competitive solution, obviously. For the rest of the process, UORs/UCRs aside, time is not given as the priority—risk avoidance and scrutiny are the priority. There is that quote: “it takes as long as it takes”. That is the bit of the process, not just in DE&S but beyond that through the other layers of approvals, that could be dealt with in a more deadline mentality mindset.

Herman Claesen: I agree with the sentiment of the question. The procurement process that we have is the full accountability for successful deliveries, not just something that can be put on the front door of DE&S—especially for the large complex programmes that have drawn significant budgets, have political connotations, and deliver broader economic benefit to the nation and sovereignty requirements. Integrating that and bringing it all together goes beyond the very simple words of a procurement process that perhaps DE&S as an acquisition organisation should be working to.

More integrating, bringing all these elements of Government in a much closer, coherent and integrated way, and also integrated industry, is definitely an area that we all could benefit from—the Armed Forces as well as MoD and industry—to make sure that the defence programmes ultimately get successfully delivered.

- Q91 **Sir Geoffrey Clifton-Brown:** DE&S sits in a funny place, doesn’t it? It sits between the top-level budget holders—the six commands—and the strategic centre at the MoD. It has almost an impossible job because it tries to please lots of different masters. If you were going to suggest a modification to the system, what would that be?

Herman Claesen: I would like to use the example that we are currently doing in my part of the business. The FCAS programme is a strategic endeavour. It is a national endeavour for the nation. It generates a huge amount of economic benefits. It is a multi-decade programme. The way we go about this today is in a fully integrated way. It is not just a DE&S project. It is an integrated team between the MoD head office and the DE&S team in close collaboration with industry to make sure that we are

fully transparent about the challenges of the programme, to make sure we understand better what the operational requirements are, how they transition into a programme, what the cost implications are, and how we deal with that international setting, because it is an international collaborative programme.

It starts to draw in foreign policies as well, making sure that all the authorities are there—for example, export licensing to allow us to engage, in this case with Japan and Italy. That requires diplomatic skillsets, project management skillsets, and technical understanding to draw on the best across Government and industry to satisfy all these requirements, not just the programmatic, technical requirements.

It is fundamental to bring that all together. That is what we are doing today on the FCAS and GCAP programme. From what I can see today, it is working incredibly well. Creating that partnership environment and building on what we have done with Tempest since 2018 for me already starts to pay dividends. I feel it gives us a much better chance of achieving a successful programme than a very transactional approach.

- Q92 **Sir Geoffrey Clifton-Brown:** FCAS is a classic example of what we have been talking about this morning. It involves the digital skills that I was talking about, and also what other members of the Committee were talking about—constantly changing specifications, sometimes for a good reason because the world outside is changing. How do you manage those changes? Does there come a point where you or the procurers, DE&S, have to say, “That’s it. This is what we want”? How do you manage a constantly evolving situation?

Herman Claesen: The first thing to recognise is that it is the reality, isn’t it? Operational requirements change. We live in an increasingly uncertain world. We know things today that might be different in due course. Especially since it is a long-term programme over multi-decades, it is hard to predict the future in some instances.

But there are a number of things we can embrace to allow us to manage that risk in a better way. I will start with industry. One of the first things we need to do is design for change. We have invested tremendously over the last 10 years in the UK, both industry and Government, in creating open system architecture standards for defence programmes. Now is the time to bring this to reality and implement it as a future solution. That, by default, should make it easier to implement future changes.

On the procurement side, accepting that requirements change, how do we make the process work alongside that? If it is a fact and a reality, how do we make sure the process is aligned to that? I think that has to be done through a more risk-based approach, focusing on where those changes can occur, understanding what that means in risk and allowing the procurement process to do up-front investment, as we are doing today in the FCAS and GCAP environment, to address these challenges.



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As I am sure previous witnesses have expressed, programmes go wrong at the start, not at the end, and that is particularly the case for our programme. Getting the enablers and the infrastructure right to deal with the agility that we need in the programme is a fundamental requirement for the programme. The philosophy of “left shifting,” as we call it—instead of allowing the risk to occur at the back-end of the programme—is a fundamental part of the solution space. But the procurement process, the funding for it, the budget approach and the business case approach all need to match that way of thinking.

Paul Livingston: We have seen some recent other procurements that have taken this spiral development into account. We were recently awarded the TIQUILA contract, which initially looks like some unmanned aerial vehicles that can network together and do sensing capability, but actually the core of the programme is a kind of 10-year spiral development with open architecture.

By not being rigid about whether it uses Lockheed Martin platforms, or which subcontractor does which particular piece, that ecosystem will allow us to work alongside industry and academia to draw solutions in, test them out rapidly, decide what works and what doesn’t, and allow the Government to iterate. Alongside that, there is a commercial framework that is more innovative than the kind of things we have seen historically.

Q93 **Sir Geoffrey Clifton-Brown:** I hear both your answers, but, wearing my Public Accounts Committee hat, we have a 10-year Defence budget of £242.3 billion, and you are both involved in some pretty big projects. It is all very well having that open architecture and everything else, but if you have to manage a budget, several billion on each of your projects can soon put the whole budget for the Defence procurement plan out of kilter. How do you manage what we would like to do in an ideal world against having to meet a budget?

Paul Livingston: I think the point was made earlier that the annularity of budgeting really does not help. Clearly, there needs to be control on public expenditure—one would fully accept that. But when we in industry are given a project or win something, we have a project manager or a programme manager. They are given a budget and an overall timescale to deliver that programme, and we might well measure their metrics as they go along to see whether they are, broadly, spending at the rate that we would expect. But we don’t say, “In a four-year programme, you have to spend the first 25% in year 1.” They would have that flexibility to manage across the boundary. That is an important aspect of being able to have more flexibility.

The other thing perhaps relates to your earlier question about process improvement. You will, rightly, think of Lockheed Martin and BAE Systems and others as suppliers. We are actually quite big customers as well. We spend quite a lot of money in the marketplace, particularly in the United Kingdom—that is a good thing.



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If one of my programme managers says, "I need to go off and acquire a sub-system to go into a particular solution that we are providing," we look at the overall bid or budget—whatever we are putting together—and we agree. We give that programme manager the authority to go off and run a competition, as Lockheed, for performance, cost and time parameters. If they find their solution and run that competition and their solution is within that approved performance, cost and time budget, they do not have to come back and say, "I've done the job you've asked me to do—is it all right, or do you want to look at it all again?"

At the moment, we go all through these various Committees with a business case to run a competition. That is approved, and even when the procurement competition finishes and there is a compliant performance, cost and time solution, it goes through all the approvals again. That does not seem particularly efficient, nor does it help you with your costs and your time to deliver.

- Q94 **Chair:** This point about annularity has been made to us again and again. We are deliberately, if you like, hammering the nail on this because we want to understand whether what we are being told is correct and you are very much, Mr Livingston, bearing out what our ex-military customers were saying half an hour ago—that although taxpayers' money clearly has to be protected, this obsession with annularity means that we do not necessarily do these things anything like as efficiently as we might. Have I characterised you fairly there?

Paul Livingston: That is perfect, yes.

- Q95 **Chair:** I won't argue with "perfect". Mr Claesen, what is your point of view?

Herman Claesen: I would like to confirm the point about annularity as well. I know it is high on your agenda, but it is the same from a BAE Systems point of view. Having better certainty and better management or flexibility of the budgets between years is definitely a benefit that can help all of us.

I would like to look at the whole issue about budgets as an opportunity space, especially for the UK; budget pressure has always been a fundamental part of defence acquisition and we have embraced that on the GCAP programme.

The mantra we are pursuing is that this is going to be half the time and half the cost of what we have previously done on other programmes. It is a fundamental design feature. It is a fundamental requirement of the programme. That drives a transformation agenda. That drives an agenda of doing things differently. That drives an agenda of thinking differently about how you go about designing and manufacturing a solution. I come back; it then drives different investment requirements. You spend to save, which means that the left-shifting of the programme becomes so fundamentally important.

- Q96 **Chair:** Sorry, but for the benefit of the uninitiated, could you explain what



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you mean by “left-shifting” please?

Herman Claesen: Sure. Typically, what happens is that you make a lot of assumptions at the start of a programme. A lot of these assumptions might, in some instances, be unsubstantiated or not sufficiently analysed or assessed, which then manifests itself as risk.

In large programmes, such as combat air programmes and shipbuilding programmes, you are not finding the problems until things start to come together. We switch the power on; we start to test things; we start to find out that some of these assumptions might be incorrect or do not work. To then go and fix the problem when the physical product is created becomes quite expensive. You need to take things out. You need to rewrite code. You might have to change physical aspects of the solutions space.

If you can address that risk much earlier in the programme—very specific elements of these assumptions, carefully selected—then you are getting more certainty in the programme that these issues won’t occur at the back end of the programme, but it requires you to make investment on the left-hand side of the programme instead of the right-hand side of the programme.

The principle here as well is that the amount of money that you spend on the left-shifting activity—the de-risking activity—is ultimately a lot less, for the reasons I described earlier, than actually having to spend the money on the right-hand side. This is particularly important now, on any defence programme. As a result of digital enablement, the evolution of digital capability—the use of model-based techniques, visualisation techniques, and the recreation of virtual environments or the real environment in a virtual environment—allows us much better to address these kinds of issues up front in the programme.

But if we are, as a result of a procurement process, suppressed to the front end and say, “I really need to have a lot of certainty on the total programme before I can progress”, it becomes a lot more difficult for us to do that left-shifting activity.

I agree with some statements that some people made. There is a level of trust involved here because some critics may say, “Well, I can spend the money today, but who tells me you are not going to be spending it again?” But I think there is a lot of analysis out there that tells us, specifically with the digital aspects now, that this is absolutely the right thing to do to keep costs under control on any future complex programme going forwards.

Q97 Richard Drax: I am going to pick up on one of your points there, Mr Claesen. From your side, what are the leading causes of delays and cost overruns in delivering large projects?

I have two examples that I would like to highlight. One is the Type-26, the anti-submarine frigate—steel first cut in ’17, and delayed because the ultra-quiet propulsion gearbox specifically designed for the ship was not ready on time. To my surprise, I read that the hulls were closed and had to be cut open to slide the gearbox in. That seems to me ludicrous.



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Obviously, someone responsible for the project should have thought, "Don't close the hulls until we've got the gearbox." That to me is almost too logical, but maybe you can help me with that.

The second example is your company, Mr Livingston. When you were asked about the Crowsnest delay, your reply was that there was a significant delay with the subcontractor, Thales. Those are two examples of delays. Can you tell me what you both think—starting with you, Mr Livingston?

Paul Livingston: Sure. On leading causes of delays, we gave broad evidence to the HCDC back in 2021 or 2020 on programmatic delays. For us, there are two key areas. The first is supply chain performance. You ask specifically about Crowsnest. I remember being in this seat not so long ago and answering many questions on that programme. That was down to problems with Thales, the subcontractor. We have clearly learned a lot of lessons from that as an enterprise. We need to identify those issues earlier. It can be harder to get clarity on what is going on in the supply chain when your supplier is another big prime, effectively, as opposed to a small and medium-sized enterprise, where it is easier to dig in and see what is there.

Lord Levene's evidence pointed to the fact that development issues can also contribute to that. Thales was our subcontractor, so we are the prime, and it is our fault that the programme went late, but the development of that radar capability, which was thought to be relatively low risk when it was assessed, turned out to be not anywhere near as low risk as people thought. That is what contributed to those factors. Most of the large defence programmes have a lot of development pieces in them. To some of the evidence that was given earlier, the more bespoke UK you specify something, the more bespoke and less generic it becomes, and the more technical risks there are sometimes in delivering that.

Q98 **Richard Drax:** Are you saying that the leading causes are the supply chain and the specific equipment perhaps not being ready or technically right? If you were to give me three, what are the leading causes of delays and overruns in your business? From your experience, what are the three main reasons?

Paul Livingston: Sometimes internally, sometimes externally, it is development risk, and that development risk not being realised and the need to bring in more engineering resources. Sometimes it is about supply chain management. Occasionally, we have seen delays on programmes, to give you a third, because of Government dependencies. There is a term that is used called GFX, which stands for Government furnished, and the X can be anything. It can be intellectual property. It can be people. It can be resources. Sometimes we do not see that GFX being delivered in line with what was agreed in the contract. That can also lead to a delay.

Herman Claesen: Unfortunately, I can't comment specifically on Type 26. I know that we have had challenges there.

Chair: We appreciate that you are an air systems specialist by

background. We understand that.

Herman Claesen: I am an air systems person, but from what I observe of large, complex programmes like Type 26, but also the air combat programmes—

Chair: We are looking for general lessons.

Herman Claesen: Precisely. There are two things that I would pull out. What I observe largely in the air domain is that getting the delivery environment right—I make that very generic, and will come back to it in a minute—and getting it set up in the right way with the right accountabilities is the biggest driver of risk. First, to the technical risk that resides in the programme, I will give you a few examples. In my previous role I was the CEO of Eurofighter. You could split up a typical Eurofighter programme of capability enhancements into a third, a third and a third.

The first third was all about the requirements capture, and industry providing a solution to the requirements, providing a costed proposal and doing commercial activities to ultimately press the button and say, “Contract launched. We’re now delivering.” The middle third was the engineers doing the coding and making things, and the last third was doing the certification, the qualification and the commercial close-out. When we are looking at a total programme, in terms of lapsed time, keeping it on track, where the risk can occur and how we can make it go faster and contain the cost, we have to look at it in that context.

The first and last thirds are specifically related to how you set up the enterprise. A lot of the air programmes are in a collaborative environment industrially. You want to make sure you can do that in an environment where you do not have decentralised decision making, and where you have empowered organisations that understand what is going on and can be responsive and agile in decision making. You don’t want to be in an environment where there are endless debates about requirements, and where vetoes are being used, potentially resulting in an unrealistic requirement set that subsequently can’t be delivered. That manifests itself at the back end of the programme—the last third.

In terms of the technical risk, I will pick up what I said earlier. I think we are in a unique scenario. In some ways, this is like Type 26, in that there is a lot of technical risk in the programme. Sometimes it is hard to visualise or analyse in great depth—ultimately, they are complex systems—exactly how that risk manifests itself. Sometimes the risk is suppressed to be competitive, especially in competitive proposals. With digital enablement unlocking the potential of digital systems, we are now able to have a much better understanding of how that risk manifests itself.

I give the example of what we are doing on the Tempest demonstrator, which will be flying in the next number of years. We haven’t built it yet, but we have flown it for hundreds of hours—something we never did on Typhoon and F-35. We can digitally visualise every single element as if it were physically in existence. We can analyse how things get together and

where there are interface problems. We can model certain scenarios, which should significantly reduce the risk going forward. We are learning from past experience and are unlocking new technologies and innovation to protect programme performance going forward.

- Q99 **Richard Drax:** So modern technology is really going to help the design, because you can experiment with it technically rather than having to build it and then find its faults. Lastly on this question, what part do politicians play in this? Governments ask for eight ships, then can't afford eight so only want five, and then want three two years later. I assume that adds hugely to the cost of anything that Governments ask for.

Herman Claesen: It comes back to what we spoke about before. These complex programmes are influenced by politics, budgets, technical risk requirement setting and so on. Getting that alignment right across all the stakeholders of the procurement system is a fundamental part of creating success. A lot of the big, complex programmes that we talk about span multiple Governments. If every Government changes their defence policy or priorities, that doesn't help the successful delivery of these programmes. They need a strong industrial strategy that underpins a strong defence strategy with clear, long-term ambitions. Again, with the combat air strategy, which we established in 2018, we are on the right track to make that happen. More of that is the answer going forward.

Paul Livingston: I do not want to repeat that, because I think the multiple Government, multiple defence priority point is a very good one, but I will add that it is not helpful when political pressures for preferred suppliers for political reasons do not align with the capability need.

- Q100 **Chair:** Mr Claesen, thank you. As I say, we appreciate that you are not an expert on Type 26, but I will say very quickly that that programme has not been BAE Systems' finest hour—not that you were involved in it. Perhaps we can leave it there.

Mr Livingston, I have two quick questions from the Chair on Crowsnest. The Ministry of Defence has consistently failed to give us a precise date for what is called the initial operating capability—in other words, when the thing really goes live and can fight. Can you today give us an IOC date for Crowsnest?

Paul Livingston: They are literally negotiating right now what the final contract re-baseline looks like. The IOC we are planning is quarter 3 of 2023.

- Q101 **Chair:** So the autumn of 2023, in effect.

Paul Livingston: Yes, and I would also say that it has a war-fighting capability now. You and I have spoken before in these forums about the fact that when we went on CSG21, it was not all that we hoped it would be. However, the more recent software loads have created that level of confidence within the customer community—that is, both the Royal Navy and DE&S. But yes, IOC, autumn of 2023.

- Q102 **Chair:** For the avoidance of doubt, there have been some rumours from



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the industrial community that because of the long delays to Crowsnest, it was a candidate for cancellation in the forthcoming defence White Paper refresh, which we are now expecting, according to Ministers, by the end of June. For the avoidance of speculation, can you confirm that it is not going to be cancelled?

Paul Livingston: Not to my knowledge. Like I say, we are literally about to work through the process of the review note, or DE&S is working through the review note process, to deal with the re-baseline of the programme, which includes the IOC and the revised FOC, and we are committed to delivering to that programme.

Q103 **Chair:** But again, for clarity's sake, that has not yet all been signed off.

Paul Livingston: No. I think the final business case is in work, but we are literally on the cusp of signing that contract re-baseline. I think they have the authority to do it, but it is just two commercial teams in a room having a discussion before they put ink to paper.

Chair: All right, thank you very much. On that point, I turn to Mr Robert Courts.

Q104 **Robert Courts:** A few moments ago, when we were talking about the efficiency of the defence procurement programme, both of you said, essentially, "We do not do this as well as we might." Now, of course, the multimillion-dollar question—perhaps literally as well as metaphorically—is who does it better? Who has a particularly good, efficient programme that you have worked with?

Herman Claesen: My experience is in Europe, largely, and of course, now also with Japan. If I compare with those nations, I do not think we are doing that badly, relatively speaking. Why do I say that? If I give the example of some of the Eurofighter partners, I see some of the procurement systems that are overly bureaucratic, stifled in process and resulting in a lack of agility to respond to changing requirements, which leads to missed opportunities for better programme delivery to the war fighter, as well as containing the budget requirements. I also see sometimes very transactional approaches, with both industry and Government hiding behind contracts, again leading to protracted delivery and missed opportunities. There are some European countries that we should not learn from in that context.

France does it quite well, I think, from my limited engagement with them. Why is that? Because I observe that they are highly integrated across Government and industry. They have a very clear industrial strategy, not just nationally but using export, in the case of combat air, very effectively to support their national endeavour. We just need to look at what contracts Thales won over the last number of years as an example of that.

I am very impressed with Japan so far. Japan is doubling its defence budget. They are coming from a place where their procurement process was quite transactional, where industry was to some degree kept at arm's length and where the bulk of the risk was owned by Government. They are



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recognising that that is not how they are going to deliver a successful increase in their defence budget and the increased operational requirements they are looking for, and they are rapidly transforming themselves in support of that. They are doing that with determination, with an approach to learning from others, and I have to say that I have been very impressed so far with the journey they are embarking on.

The last one, which is probably the best answer to your question to some extent, is that I have had some involvement with the US and on DARPA in particular. We touched on innovation and technology a bit earlier. I am in awe of the DARPA way of working—the way they are able to embrace innovation and new technologies against a clearly defined operational requirement set and, more importantly, allow people to fail and to learn from it. That is an interesting thing to put in a procurement process: allowing things to fail, to learn from that, and to then rapidly move on and look at bringing into service at pace, not just with the big primes but with a broad SME base. There are some really small companies delivering some amazing stuff within the context of the DARPA approach.

Q105 **Robert Courts:** That is very helpful, thank you.

Paul Livingston: I will start by picking up on the US thread. There is a clarity of budgets that we get, at a detailed level, through their appropriations process, which really means, “Okay, we know what the budget is, so now we can focus on what we can fit within that budget.” They also do earlier pre-procurement engagement.

One of the things that we are seeing now, perhaps as a result of the lessons learned from Ukraine, is that the MoD, particularly the financial and military capability group, have brought industry in. We are doing things like shared threat briefings, so we really understand where their concerns are and where they want technology to go. I think that that level of engagement is good and I would like that to become even more business as usual.

Of course, in the United States, they have also introduced some legislative measures, such as the CHIPS Act and the Defence Production Act, that have helped to secure supply chain capacity and resilience.

Rather than go on to Europe, which I am not a great expert on, I will perhaps talk on Australia. Australia is very good at detail and clarity, and is very consistent on those timescales. We recently were thrilled to be successful on JP9102. Everything in Australia has a code name, I’m sorry, but if you think of it as Skynet enduring capability for Australia, you are broadly in the right space—sorry, that was a terrible pun. When they set out their—

Q106 **Chair:** Just for the avoidance of doubt, you are talking about the defence Skynet—nothing to do with Arnold Schwarzenegger and “The Terminator”?

Paul Livingston: Yes. The contract award date was published in Australia’s forward-pipeline look probably two or three years before



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contract award, and it stuck to that pretty much to the day, which goes back to that deadline mentality point that I made earlier. I think Australia is also realistic about onshore work. It knows that it does not have the people or the capacity to build all its defence capability inside Australia, so it has looked at where it is sensible to have that industrial development, engagement and workshare, if you like, in content, and where it is better off buying from the market, going through more of an open-market acquisition and looking at where similar technologies have already been procured.

Poland is another good example with recent, very pacey buys. I guess that, if you are in Warsaw, you perhaps feel a little bit more timescale-driven than people who live farther away from the border with Ukraine.

Q107 Chair: The Defence Committee went to Warsaw last year, shortly after the Russian invasion of Ukraine, and we can absolutely confirm that there is a sense of urgency there.

Paul Livingston: I think sometimes they have made decisions—they have looked at certain systems or a certain capability that they require, and have perhaps done a trade-off, where they have bought a slightly less capable version, but one that can come in in, say, 2024 rather than 2028. They are really looking at that time-delivery-cost piece.

Israel is another example that gets raised regularly. Israel has a different attitude to risk tolerance, “fail fast” and not over-governing. Again, it is very joined up between industry and Government and very well synched in terms of an industrial strategy.

I think that those are all areas from which lessons can be drawn to do some things better, but, just to be clear, I do not think that we are terrible either.

Robert Courts: That is very helpful. Thank you.

Q108 Sir Geoffrey Clifton-Brown: In the context of trying to improve relationships between industry and Government, particularly on MoD procurement, could DE&S, in particular, improve its skills base? In other words, could it have better solicitors to write contracts? Could it have better project managers to liaise with you at each stage of the project? Could it have better accountants to discuss with your accountants how to manage the finance? Could they have better digital skills? What would actually improve the relationship between the two of you?

Paul Livingston: If I could make one broad point first, the biggest threat to all of us being able to deliver the outputs of the defence enterprise—whether that is MoD, DE&S, industry or the military—is the lack of people and skills. You highlighted digital skills earlier, which is a real concern. We all have to get better at doing that.

You can do two things. One thing that you can do is go and grab more people. That can be quite difficult in a competitive marketplace, with other industries out there that perhaps have bigger wallets and can afford to do



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more, such as the mining industry right now. One of our concerns is that we have lost a couple of key and great data architects. They have gone to the mining industry because their budgets are ones that we cannot compete with.

If you look at DE&S's large headcount, they could—by improving their operating model and their process—do more with the people they have. It is unrealistic to say that they are suddenly going to swap out a whole bunch of people, but can you sharpen the process, have a cleaner operating model, have less people looking at what each other is doing and create a more focused outcome? That would free up people's time, effectively, and make them more efficient, and you would be able to get things done quicker. I do not think it is necessarily about changing the people; it is about giving them more capacity and more empowerment. Our experience in industry is that people respond well when they are empowered.

Q109 Chair: This is very interesting. We realise that you do not want to upset your customer too much—we know the way the world works—but if you are prepared to be brave at the margin, when you talk about DE&S improving its operating model, what do you mean? How could it improve it?

Paul Livingston: I believe the Committee recently went down to see some of the work it is doing at Abbey Wood.

Chair: We visited Abbey Wood a couple of months ago. It was a good visit.

Paul Livingston: That work is really exciting. I have been involved in defence for more decades than I care to think about, and I have seen various attempts at procurement reform. It has always started with "Let's close the doors and get some people inside MoD to decide whether we could do this better." This is the first time I have seen them say from day one, "Let's bring industry in." They did not bring in the people like me. They brought in the practitioners—the people from both the DE&S side and the industry side who actually work the day-to-day grind of procurement. They mapped out those workstreams and said, "Where can we reduce time, reduce duplication and be simpler on oversight?" I am genuinely excited. I am not being sycophantic to my customer; I genuinely believe that there is a desire to change and an energy for change that I have not seen before.

Q110 Chair: Herman, does that tally with your experience?

Herman Claesen: Yes, and I would like to bring it back to the original question, if I may. The answer to your question has to be yes. It is for us as well. We are all in the war for talent at the moment. I can only be a good leader in BAE Systems if I have good people. We cannot do the work on our own. The same applies to DE&S. Does that mean that the current people in DE&S do not have the right capabilities? No. The critical mass of high-performing, knowledgeable, experienced people needs to be higher.



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The same applies to my company, and I am sure the same applies to other defence companies in the UK.

We are all in the war for talent at the moment. I am on a massive recruitment drive. My company has put the most investment ever into early careers. We have recruited the highest volume of people in early careers that we have ever seen. That has to be a fundamental part of DE&S's strategy. I am very encouraged by what I see of the new CEO coming in and embarking on a 2025 strategy refresh, but a solid resource plan that recognises this as a war for talent and has a good attraction to come and work in DE&S and in the defence environment has to be a fundamental part of the strategy.

Q111 Sir Geoffrey Clifton-Brown: That is a really interesting answer. I would love to explore more how you train some of your people, particularly youngsters, but I have two other completely different areas that I want to raise.

First—and I ought to declare an interest: I have a daughter who is a very high-powered IP lawyer—considering that the Government put a lot of money into the initial investment into some of these projects, and you then go round the world and sell them, do the Government take a sufficient share in that process through either licensing or IP agreements?

Herman Claesen: I think they do. That is well managed, and it is reflected in the pricing of the export programmes.

Q112 Sir Geoffrey Clifton-Brown: Anything to add, Mr Livingston?

Paul Livingston: BAE is far more experienced in that, because it does more in the UK and exports from there. We tend to do more in the United States and export from there. In the UK we currently have a programme that we are delivering to the MoD called SkyKeeper. We have several export customers we are pursuing with that SkyKeeper solution. It is a ground-based air defence command and control. If we can secure those export customers, the MoD will benefit.

Q113 Sir Geoffrey Clifton-Brown: Lastly, I want to move on to a completely different subject. Ukraine, among other things, has taught us that the old way of procuring to a stockpile that can be replenished slowly through these discretionary and non-discretionary wars may not now be suitable for conflicts like Ukraine. Are we going to need to actually gear up some of your industrial capability? There are times when you have surplus capacity, but at other times you need to procure quickly—NLAWs in Northern Ireland were a particular example. Do we need a bigger industrial capacity in some of our capabilities?

Paul Livingston: One thing that is exciting, looking at new technologies around additive manufacturing and digital, is thinking about what the factories of the future will look like—rather than having bespoke production lines for one particular missile or munition, building a more flexible factory that will allow you some level of surge flexibility because you can flex things around.



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We have done a lot of roundtables with the MoD at very senior levels since Ukraine on stockpiles and supply chain resilience. One of the biggest issues is the way defence is procured over years, where there are lots of multi-tiered supply chains. We have talked about supply chain illumination at the Committee before. You can end up getting people three or four levels down the supply chain to invest in more capital equipment; they do not have as deep pockets as the big primes, so it is more of a risk for them.

Frankly, one thing that does not help the UK to be competitive in the international marketplace for its SMEs at the moment is that the level of ESG resistance for small defence companies is really hurting them in the UK. The trade body ADS is doing a big piece of work on this, and rightly so. What we are seeing is small companies being refused even basic banking abilities because they do defence. A lot of the financial institutions now say, "I'm sorry, but if you do defence you don't meet our ESG criteria. We are therefore not able to provide you with banking services, much less capital investment." That is something we really have to think about as a nation.

Chair: You raise an important point. I do not claim to speak for the whole Committee, but my instinctive answer is that if we had not had a defence industry building Spitfires in 1940, this hearing would not be taking place. I think people need to remember that ultimately the defence industry is there as a guardian of our liberty.

Q114 **Sir Geoffrey Clifton-Brown:** Given that we all agree that we need increased capacity in some of our manufacturing, who should pay for it? Should it be you, the industry, through higher prices? Or should it be the Government, because it is such an uncertainty and you do not know when you will need a big surge to produce NLAWs or whatever it happens to be?

Paul Livingston: The reality is that any defence company or any industry will invest based on what the business picture looks like. I am going to sound like a bell on annualised contracting again, but the way to have longer-term certainty rather than a massive spike and then a massive valley—the way to get the best value and the best deal for the taxpayer, where industry can make the majority of capital investment—is to have a sensible, steady and stable approach with some level of surge capacity on top.

Herman Claesen: I would like to add a couple of points. On the last point about strategy, I think it has to be a paramount, fundamental element of what you have just described. Having a strong industrial strategy that allows us to invest with a level of certainty has to be a fundamental part of that.

Let's also pick up on some of the other things, so that this does not become a huge cost to anybody. Again, there is the investment in technologies. The factory of the future was mentioned, and that is absolutely spot on. Typically, what drives a lot of these capital investments



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is the start-up costs, the shelving cost and then the time it takes to ramp up again. BAE Systems has invested heavily in a factory of the future. We even call it a factory in a box: when we are finished with it, we can put it away, and then we can take it off the shelf and start it up again to help with the sustainment of production lines.

But I think it goes a step further. Let's also look at things like exports: if we continue to export our products into other customers, we are protecting our production lines, which reduces the burden on industry and Government to sustain the skills and the production lines.

It is also about taking a strategic approach. We have done this in the past. On Typhoon, for example, we have sustainment contracts. They are very carefully managed, and they are very valuable to both sides—a win-win. We are really clear about what level of engineering skills we need, whether it is just sustained for safety, sustained for immediate reaction to an operational requirement, or something in between. We have mechanisms, defined between us and DE&S in this case, to understand exactly what that means, how much it costs and how we deal with the investment. There are mechanisms out there.

There are opportunities to bring the costs down and to allow industry to invest in this, if we have a very clear industrial strategy.

Sir Geoffrey Clifton-Brown: Thank you both very much.

Chair: Richard, did you have one more question?

Richard Drax: Yes.

Chair: We must allow Lord Levene a fair crack of the whip as well.

Q115 **Richard Drax:** I have a constituent who served—it does not matter where—in the armed forces for years. He now runs a company and is very much involved in procurement, bidding and everything else. His view, and he has given me some pretty stark examples, is that industry runs rings around the MoD, adding to costs and so forth, and that you guys are far better at drawing up contracts than the MoD is at looking through them at the specifics and the tiny detail. That has the result that suddenly, a year or two into the project, they find, “Oh, I didn’t realise that.” Is there an element of truth in the idea that you have a better team than the MoD?

Paul Livingston: I would not talk about whether our team is better than BAE, the MoD or anybody else. I have read some of the written evidence, which was really about what happens when industry deliberately bids low and thinks, “I’ll make it all up on the change orders”—I think that’s what you are alluding to. Let me just say that I cannot speak for all of industry, and I am not here to speak for all of industry; I am here to speak for Lockheed Martin. Our process just does not allow that—I would be fired for that, right?



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When a requirement comes in that says that we have to deliver these things, we put together our internal bid. That internal bid is independently reviewed. It will include pure cost, including the supply chain and the hours we think it is going to take, as well as the governance elements over it and the risk factors that we think could materialise. We put a cost judgment against those and we put that in, and then our overhead and profit.

At that point, it is all independently assessed. There is nowhere in the Lockheed process where we are able to turn around and say, "Oh well, we'll make it up on this bit." I can promise you we do not do that, probably to our detriment in some competitions—we recently lost a programme called Vulcan. We will always bid what we think it takes to do the job. Sometimes we get that wrong: Crowsnest is an example, and we have taken the financial burden of that issue, not the MoD, which is appropriate and right.

"Bid low, then grow" is not something that we do. You will probably have to call some other companies in if you want to hear about that.

Richard Drax: You are clear, Mr Livingston, clearly. Mr Claesen?

Herman Claesen: Ditto. I also have very clear processes that we have to work through. We also have examples where we no-bid because we simply cannot see how the budget and the requirement can match together into a credible solution. These are fundamental gates in our process. They are actually called "no-bids or bids", and they ask a very specific set of questions internally, underpinned by a strong governance process to make it happen.

But I would like to go a step further, to some degree. It is not in our interest to do that. DE&S and MoD are a partner in our success. If we do not have quality relationships—effective relationships—we are undermining our long-term success, and we absolutely have no interest in doing that. It would be wrong of us to deliberately target a strategy whereby we are trying to pull a fast one, or whatever you want to call it, that then affects the long-term relationship.

I would bring you back to some of the things I mentioned earlier. Where we see the best successes on defence programmes is where we have a strong partnership, we have transparency and we understand of each other what is important. One of the best programmes that I have worked on was a Typhoon availability service programme. I remember sitting down with my colleague from DE&S on day one. He put the contract in the bottom drawer and said, "If this contract has to come out, we have both failed." The programme was one of the most successful programmes that have been run. It managed to produce hundreds of millions of savings back into the MoD and made sure that the Typhoons were there on the frontline. If there was no Typhoon on the frontline, I was hurting as much as the RAF was and my counterpart in DE&S was. That is the right behaviour to make defence programmes a success, not going behind the—



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Q116 Chair: I apologise for cutting across you, but we have to keep to time. I am going to ask both of you the same question that we have asked all our other witnesses. If you each had one key suggestion to materially improve defence procurement in the United Kingdom, what would it be?

Paul Livingston: Move from a culture that celebrates risk avoidance to one that celebrates balanced risk taking.

Chair: All right—so take more risk.

Paul Livingston: Yes, and accept that sometimes if it goes wrong that is okay. Look at SpaceX. When they launched that massive rocket the other week and it cleared the tower but did not quite get all the way into orbit, I sat and thought, “If I were the programme manager and that were a defence programme, what would my next sitting at the HCDC look like?” I think there is a thing about whether we celebrate appropriate risk taking and allow people to fail occasionally or spend years trying to iron out every single risk. We know from our experience with other programmes that that is not always a successful outcome anyway.

Q117 Chair: All right. You have made your point very effectively. Mr Claesen, what is your one overriding suggestion for improvement?

Herman Claesen: A coherent and integrated defence policy and strategy that is strongly connected to, or flows down into, an industrial base, and increased integration across all the stakeholders of defence in a partnership approach.

Q118 Chair: Forgive me, but could I boil that down to being a lot more joined-up?

Herman Claesen: A lot more joined-up and clear around the long-term intent. Move away from the annularity, as we have been talking about, and be clear about long-term ambitions so that industry can invest, project and get ready to deliver the requirements that our armed forces need for the future.

Chair: Gentlemen, we realise that you are both very busy people. Thank you. For the record, the written evidence from both your companies was also very helpful: whoever drafted it, whether it was you or others, did a good job and provided us with some very valuable data. We hope to report in the not-too-distant future and to try to take on board some of the very good advice that you have given us.

We are going to do another quick scene change before we hear from our third witness. We will suspend for a couple of minutes while we do that. In the meantime, on behalf of the whole Committee, thank you again for your time and insights.

Examination of witness

Witness: Lord Levene.



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Q119 Chair: Welcome to our third panel in this morning's hearing on Defence Equipment and Support, the main procurement arm of the Ministry of Defence. We are delighted to have with us Lord Peter Levene, formerly a Chief of Defence Procurement at the Ministry of Defence. Lord Levene, I think you know all my colleagues here, so to save time I will not introduce them to you again. You have sat very patiently at the back of the room for the last couple of hours and have heard what the other witnesses had to say. We will run this session until about 10 minutes to 12; then colleagues want to get downstairs for Deputy Prime Minister's questions. That gives us at least a good half an hour with you.

I think you wanted to make a couple of quick points initially about your time as CDP, and about the record on procurement since then. Over to you.

Lord Levene: Thank you very much. I spent 20 years in the defence industry, until 1984, when, very much to my surprise, I was approached by Michael Heseltine. He had discussed with Margaret Thatcher how he was fed up with contracts not running to time or cost, with the Government picking up the tab all the time, and with the Armed Forces not getting what they wanted on time or on cost. This was a surprise invitation, but I decided to take on the job because the company that I was running in the defence industry had a much better record than that, albeit that the vast majority of its business came from overseas; it was not dependent on the MoD for its work, although it got a reasonable amount from it.

Margaret Thatcher called me in and said, "Right, we're giving you this job. Your responsibility is very simple: your job is to provide the Armed Forces with the best possible equipment on the best possible terms, full stop. PS, your job is not to keep the British defence industry in the manner to which it has become accustomed." That caused quite a lot of uproar at the time, but this was managed by Michael Heseltine, who had come from an entirely commercial background and understood that. The period that was then initiated was known as the era of competition, or perhaps more correctly, confrontation.

Very soon—maybe a few weeks—after I started the job, I saw an article in the business section of *The Sunday Times*. It said that they had been talking to Westland Helicopters; they had found out that Westland Helicopters were running out of orders and would not be able to keep a lot of people employed, and, quote, "What was the Ministry of Defence going to do about it?" That, if you like, was one element of the real problem. In any other industry, you do not go to your customers and say, "We need more work. What are you going to do about it?" You have to get on with it and look for the work yourselves. There then followed a number of instances; I have not got them in chronological order, but I think they explain the view that was taken in the industry. Westland was the first one.

I was then asked to appear before the House of Lords Science and Technology Committee, which at that time was being chaired by Sir



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Francis Tombs. The Committee had been saying that the Government were spending too much themselves on funding. It had been asking the industry to fund their new development programmes, and they would then get orders for the equipment that had been developed. He called me in and said, "Why are you doing this? Why don't you make the contractors pay the development cost, and once they have produced something, if we like it, we will buy it? If we don't like it, we won't buy it." My reply was, "Sir Francis, I have to say this to you. You are the chairman of Rolls-Royce. Nearly all Rolls-Royce's business now comes from Government-developed contracts. How do you explain the conflict between the two?" He turned around to me and said, "Mr Levene, it is not for you today to confuse my job as the chairman of Rolls-Royce, a commercial company, with your job as handing out development contracts. Do I make myself clear?" I said, "Certainly."

I went back to my office and phoned the head of Rolls-Royce, and I said to him, "Look, I must tell you something. You are trying to negotiate a new contract with us, but I am afraid I can't do that any more." He said, "What on earth are you talking about?" I said, "Your chairman, as Chairman of the Lords Science and Technology Committee, has said that new development contracts will be funded by yourselves." This caused a tremendous row, but that is part of the problem.

Q120 Chair: We understand the philosophical approach that you took, Lord Levene. You have given us, as part of your evidence, a detailed chronology, which is very helpful. Only because we are limited for time—it is the nature of the beast, I am afraid—I would like to bring you a bit more up to date.

Some years later, when you gave evidence to the MoD and made suggestions about reforming the organisation of the Ministry of Defence, you recommended the system of what became known as top-level budget holders, and making the service chiefs responsible for their own budgets. One of the problems has been that one particular top-level budget has tended to overspend significantly for a long period of time—we will be candid and say that it is the Royal Navy—and there has been a process of robbing Peter to pay Paul in order to make up for that. Are there appropriate sanctions in place when one of those top-level budget holders overspends?

Lord Levene: You have to distinguish between then and now. As you know, I chaired the defence review, which went on for three or four years and put in certain recommendations. However, that was a long time ago. I used to do a report at the end of each year to see how it was going. After about three or four years of chairing it, the Defence Secretary at the time, Michael Fallon, said, "I don't want you to do these reviews any more. Thank you very much. Please go away." Any answer to your question, Chair, would therefore be, "I don't know," because I do not sit in the Ministry of Defence now and it has been a long time since I was there.

On the effects, I hear comments, casually, from time to time. Certainly, one of the comments was from the Chiefs of Staff, who said, "Look, we



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want to get back reasonable control of our buying, and we have been really pushed out of it." So the answer to that question is that I do not know, although one gets reports of how the Ministry of Defence is getting it all wrong and so on.

Going back to Margaret Thatcher's instruction to me, the point was that we needed to ensure that the money that we had available was spent properly. One way that I dealt with that was that I went into my office in the MoD on one of the first days that I was there—I had never been in a Government Department before—and said, "Now, look, it's the 18th March; how are things going?" Of course, that just before the end of the Government's financial year. About 50 people were there. There was a long silence until one man stuck up his hand. I said, "Ah, you're giving me an answer?" He said, "Well, yes. The answer is that we are likely to have an underspend of £500 million." Being naive and coming from the real world, I said, "You're telling me that you've got an underspend—an underspend—of £500 million to the end of the year?" They said yes. I said, "Well, in my former world, that would be terrific news." They said, "Well, no, not with us, you see, because if we underspend we lose all of that money, and, next year, it's gone. The only thing that we can do is go and buy more desks and chairs and things that we can get off the shelf."

I asked, "Who's making these ridiculous rules?" They said, "Well, it's the Treasury." So I said, "I'll go and talk to the Treasury." They said, "No, no, don't do that. It's not a good idea to go and talk to the Treasury." I said, "Well, I know the permanent secretary to the Treasury well; I'll go and talk to him." Shortly afterwards, the scuttlebutt in the office was, "He has no idea what he's talking about. He's going to talk to the Treasury and they'll throw him out with a flea in his ear."

Anyway, I didn't take any notice, and I went to see the permanent secretary to the Treasury. I said, "Look, I've been brought in from the outside to try to ensure that the money that we've got meets the budget and that we don't underspend and then throw it away." He said, "I knew you were going to say that, and all my staff have told me that it is a ridiculous idea, but you have been brought in to do that and you can't if we carry on in this manner, so what do you want?" I said, "Well, I would like to have a 10% underspend to carry forward into the following year." I got the reply then, which I knew I was going to get because he had talked to me about it quite a lot, "Look, I think you're right. Against the advice of my staff, I'm going to give you a 5% underspend for next year, and you make damned sure that you spend it all on equipment." That was the first step that we made along the road—and there was a great sort of cheering in the office because that was happening—along with the issue of competition, which very much goes back to what I said about—

Chair: We will come on to that in a moment, but that point about flexibility in budgets is something that people have raised with us again and again as a Committee. I think that Sir Geoffrey wanted to ask you something about what is now referred to as exquisite procurement.

Q121 **Sir Geoffrey Clifton-Brown:** Good afternoon, Lord Levene. It is a great



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privilege to have you here and question you, given your reputation. I do not know whether you understand the term “exquisite procurement”.

Lord Levene: I have a rough idea—in other words, buying everything specially made to measure, to your design, irrespective of anything else.

Q122 **Sir Geoffrey Clifton-Brown:** Yes, exactly. You were here at the back of the room, so you heard the evidence this morning. There has been quite a lot of discussion about whether we should procure something simpler, maybe off the shelf, at a quicker rate or go for a piece of equipment that has every last gizmo on it and every last specification. Do you have a view on the balance of that?

Lord Levene: Absolutely. There are two very good examples of that. If we go back to the Falklands war, two things happened. Of course, we did not have the luxury of several years to get things ready. The first was for the in-flight refuelling of the Hercules. The in-flight refuelling had always been the domain of Marshall of Cambridge, and they were very good at it. They said, “We need to adapt it to fit the Hercules.” We asked, “How long will that take?” Then they asked, “Are you going to do the analysis of the task?” and we said, “Yes.” So they said, “In that case, two or three years. If, however, you allow us to supply you with our existing equipment, which requires minimum modification, we can probably get it done in three months.” We said, “Well, can you get it done in four weeks?” and they said, “Yes.” They did it, and it went straight into service. There was never a problem with it at all.

At the same time, there was a lot of fairly basic electronic equipment that, as you correctly commented, the Navy wanted, which was not too far away from basic test equipment that you could go and buy in RadioShack. So we went to RadioShack, bought this equipment. When we asked, “How are we going to hold it on?” they said, “Try some duct tape,” which they did. There was never a problem.

Those are two very good examples of how, if you buy off the shelf, you can do very well. There were a lot more than that. I am not sufficiently informed, but I would think that to some extent, what is needed in Ukraine falls into that category as well—“We don’t have time to go and develop this specially. Trust us, and we will do what we can.”

I am sure you remember a company called Racal. Racal were the prime suppliers of radio and communication equipment. I was insistent on competition, and slightly prior to my arrival there was a parallel requirement that for all equipment bought by MoD, the supplier gave a total breakdown of what it cost to develop. We called them in to interview them and tell them that they had to comply. They brought in several companies, and that was fine. A bit later, they said, “We’re going to bring some in to be interviewed by you, but it’s a very small number who don’t agree.” I said, “Like who?” and they said, “Like Racal.” I said, “Well, I know Racal—I know Ernie Harrison, he doesn’t mess about. Call him in.” I do not know if you remember him, but he was a very blunt man. He came in and said, “What’s all this nonsense? What do you want?” I said, “We



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want to know your breakdown of costs before we give you the contract.” He said, “Well, I’m not giving you that.” I said, “Why not?” He said, “If you ask this lot round here”—it was a much larger table than this—“how much they pay towards the equipment that they eventually buy from Racal, they’ll say, ‘Nothing. We don’t pay them anything. We wait until we find out whether they’ve got a good product that meets the requirement of the Armed Forces, and if it does, then we buy it.’” I said, “Is that true?” and they said, “Well, yes, actually.”

This goes back to what Francis Tombs had been talking about in the other direction. I said, “If he’s developing the equipment and you compete for his not-paid-for-by-us equipment—paid for internally, which is then included in their price—and it’s deemed to be a good price and a good delivery time, why on earth are we bothering with all these questions we are asking? I’m telling you now to stop it. If he puts in the best bid, give him the contract.” If I go and buy myself a new car, I do not ask Jaguar how much each one of the components costs and how much each one of those costs to deliver.

Chair: On the affordability point, Lord Levene, I think Richard has a question for you.

Q123 **Richard Drax:** Good afternoon, Lord Levene—nice to see you. How should the MoD best ensure that the equipment plan, now some £242 billion over a decade, remains affordable?

Lord Levene: It has to remain affordable by getting rid entirely of cost-plus contracts. With a cost-plus contract—I said this when I first arrived, because—

Q124 **Richard Drax:** Lord Levene, will you very kindly explain to our viewer what a cost-plus contract is?

Lord Levene: Yes, of course. A cost-plus contract, very simply, means that you choose company X to be the supplier. Company X puts in a bid for what they believe it will cost them; and as the contract continues, and its costs increase, you pay them what they have asked for. That, to me, was a crazy system. When I came in, probably 60% or 70% of contracts were cost-plus. At the end of my term, they were about 20%, and they were for things on which it was pretty well impossible to compete, like building a whole submarine, although we did make progress there, but I am not sure how much that progress has continued.

Richard Drax: My question to the two previous witnesses about how they are operating far more shrewdly than the MoD was not far off the mark, then.

Lord Levene: I also wanted, if I may, to quote very briefly from Sir Raymond Lygo, who was chairman of BAE, which is our largest contractor. When he was leaving, he was interviewed on television. They asked him how he worked out what his costs were. He said, “They”—meaning the Ministry of Defence—“put in an estimate that they know or they think will be the real cost of the programme they are given, but they pretty well



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always know that the programme will change. It will be different. There will be delays. There will be additional specifications. There will be political interference. There will be whatever, which will delay it, and that means that there will be, as you would explain afterwards—or you might criticise the contractor for—cost overruns. They are not really cost overruns; they are under-bidding in the first place.” Question: “Isn’t that a bit dodgy?” I am quoting verbatim. Answer: “Not really. I mean, it’s the world we live in.”

So there you had the largest defence contractor in the country at the time saying, “Look, how much do they have in the budget? Okay, that is what we’ll bid.” A little way through, they say, “We have an extra cost. Well, that doesn’t matter; we’ll just charge them for it, and they’ll pay what the cost really was, and not how much they have left in the budget.” If you stopped that—if you stopped cost-plus contracting—that would be the biggest thing you could do to enable you to keep control of the contract.

Q125 Richard Drax: Lastly, how do you counter the issue of inflation, which clearly will have in some cases a devastating effect?

Lord Levene: Well, how do Jaguar or Sony deal with inflation? They say, “When we put our estimate together, we know the actual cost. We have a pretty good idea of what inflation is going to be, so we include that in the cost.” If you go to buy your television for £400, you pay £400 for it. If you go to the retailer and say, “Before that, will you tell me what the actual breakdown of costs is?” they would look at you as if you were mad.

Chair: Thank you, Richard. I think Sir Geoffrey wanted to ask you something specifically about contracts.

Q126 Sir Geoffrey Clifton-Brown: Lord Levene, when you came in as chief of procurement—I looked back at your report—you made some fairly far-reaching recommendations, and I will summarise them very briefly. I think what a lot of what you recommended was implemented, but it has now gone back again. I would like to specifically have your views on which of your original recommendations you would put back in place. You suggested that we create a new Defence Board chaired by the Secretary of State for Defence; clarify the responsibility of senior leaders; make head office more strategic and smaller; ensure that four-star joint forces command focuses on joint enabling and workforce development; strengthen the financial performance of senior military and civilian personnel; and ensure that personnel stay in post longer. If you were asked to do the same job today as you did all those years ago, what would you change?

Lord Levene: Not a great deal. If I can take the one—

Q127 Chair: Most of those changes subsequently took place, didn’t they?

Lord Levene: If I could just explain. Having had long discussions with the chiefs of staff, who I had good relationships with, I wanted to change the Defence Board. If you look at the board of the largest company in the country, who has to report—in this case, to the Government? They do not



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exclude their divisional heads. However, because of the particular circumstances of the military, although the Chief of the Defence Staff would be on this board with the Ministers of Defence and the permanent secretary and the financial director, it did not work that way. That was because the Chief of the Defence Staff had no authority, as I am sure you know, over the other chiefs, which, not surprisingly, made them a bit jealous. But he needed to deal with the people who really mattered in this case, who were the Defence Secretary, the permanent secretary and the head of finance. They said, "Well, what shall we do? We do not want to upset everybody." I said, "I will tell you what to do: leave the old board in place and then we will make a new one. We do not need to specify the members, but the new board can be over the top of them, so they can actually get things done." Not doing that was a big mistake.

Secondly, the Chief of Defence Procurement, head of DE&S—whatever you want to call him—has to be a key member, because he is the guy that has to deliver what they want at the prices they agreed. He was excluded.

Q128 Chair: On exactly this point, Lord Levene, in terms of procurement, the buying of equipment and the cost of supporting it in service now takes up not far short of half the entire MoD budget. It seems rather odd to this Committee that the person who is in charge of spending most of that money—the head of Defence Equipment and Support—does not sit on the MoD board. Should that change?

Lord Levene: Of course it should. Every time I read about this, and talked about it afterwards, I would say, "Why on earth did you do that?" I have to say—obviously, I will not go into any detail—there were a lot of personality issues there and amour propre. I have great admiration for the armed forces and what they do, but—

Chair: As does this Committee, for the record.

Lord Levene: There is a lot of, "That's not the way we do it." After the Secretary of State and probably the director of finance, the most important person, to answer Sir Geoffrey's question, is the head of—I keep losing track of names—DE&S. He is not on it at all.

I can make another—if I may say so—much more important point. When I was appointed to the job, the permanent secretary in the MoD was Clive Whitmore, who everyone always had enormous respect for. He really set this all up—a brilliant man in his day. He said, "Look, Peter, I have decided that, in collaboration with the Cabinet Secretary, you will be a grade 1 permanent secretary, which means that you are the accounting officer. You are the accounting officer for vote 2 for the Ministry of Defence, which is everything to do with procurement. I have so many other problems on my hand at the moment—I don't want that. I want you to do it. Everybody agrees that you should do it. All I will say is you'd better make damn sure you get it right." If you compare it with a commercial company—I have been involved with quite a few—you would never set up an arrangement like that. It's completely mad. If the chairman says, "You are the CEO. We

don't want you on the board. You can just do what we tell you to do," it's crazy.

Q129 Chair: In that great phrase of the 21st century, we are where we are, but part of the purpose of this inquiry is to recommend positive change. Again, without pre-empting our conclusions, I suspect the Committee would have a lot of sympathy with your suggestion that the head of Defence Equipment and Support, because he spends so much of the money, should sit on the Defence Board that runs the Department.

Lord Levene: And be a grade 1 permanent secretary. He has to be. It's very important. And they should not allow the Treasury to override any good ideas they come up with, which has been a long, long battle.

Sir Geoffrey Clifton-Brown: One more question.

Chair: Yes please, but I want to finish at five to 12.

Q130 Sir Geoffrey Clifton-Brown: I listened to your remarks, Lord Levene, about bidding in competition. Do you think that the present system of bidding, probably due to the political process, is unnecessarily narrow in order to protect British industry? Should we widen the competition, maybe at the expense of British industry sometimes, in order to get a better deal?

Lord Levene: Indeed. When I came in, I was very familiar with the American system. They used to publish a magazine—I can't remember whether it was each month or each week—that listed every contract coming out of the Ministry of Defence. They would say, "Friends of the boys. We know what is going on." They wanted to get a look in. That we did. I think it still exists, but I don't know how effective it is.

Chair: I think it was the Contracts Bulletin.

Lord Levene: Yes, exactly.

Q131 Chair: Can our last question be the same last question that we have asked every other witness? I think you have heard it asked twice this morning already. For consistency, if you had one key suggestion to materially improve defence procurement in the United Kingdom, what would that be?

Lord Levene: One of the things we have done, but only on and off because it keeps changing. I came from a commercial business in the defence industry, but it did not have to be. I said, "Do not make the Chief of Defence Procurement each time either a civil servant or a military officer. They are very good indeed at their jobs—I am not saying this just for the sake of it—but I said to the Chief of the Air Staff, "Can I go and fly one of the Tornados?" He said, "Yes, we can arrange that for you." I said, "By the way, I don't want a co-pilot with me." He said, "What are you talking about?" My budget then was £10 billion a year, and I have reasonably good experience in running a budget of that size and making sure it works. If I do not get it to work, I am fired. But here you will take a senior officer who has a three quarters of a billion pounds—



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Chair: I have to hurry you because of Prime Minister's questions.

Lord Levene: He has had no commercial experience at all, so that is also what I would change. Make sure that everybody has very good commercial experience.

Chair: That is very clear. Lord Levene, thank you. The clock has beaten us, and I know colleagues want to get down to the Chamber. Thank you so much for spending all morning listening to others, and for answering our questions so thoroughly. We hope to report before too much longer, and hopefully we will be able to incorporate some of your wise advice into what the Committee concludes. Thank you for your time.