



Science and Technology Committee

Oral evidence: [Government Horizon Scanning](#),
HC 703

Wednesday 22 January 2014

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Written evidence from witnesses:

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Members present: Andrew Miller (Chair); Mr David Heath; David Morris; Stephen Mosley; Pamela Nash; Sarah Newton; Graham Stringer; David Tredinnick

Questions 221-243

Witnesses: **Rt Hon Oliver Letwin MP**, Minister for Government Policy, Cabinet Office, and **Sir Jeremy Heywood**, Cabinet Secretary, gave evidence.

Q221 Chair: Welcome to both the Minister and Sir Jeremy. We have got quite a lot to cover this morning, so we will try and keep it as succinct as we can. Can I first of all ask about the new horizon scanning programme, which we understand was launched about six months ago? Who has been the responsible Minister during this time, and who actually is accountable now?

Mr Letwin: I should probably answer that. Up until very recently, Francis Maude was keeping an eye on it because it had been set up by the Cabinet Secretary's process and he is the Minister for the Cabinet Office. As it has evolved and it became clear that what it is actually going to be focusing on is a series of things that will probably have policy rather than administrative effects, in the invisible dividing line between Francis and myself we concluded that it made more sense for it to be on my side of the House, as I deal with policy rather than administration and he deals with administration rather than policy. Therefore, I have been drafted in, and from now on I will be taking a very active interest in it.

Q222 Chair: Sir Jeremy, how often have you met with the Minister in relation to the new horizon scanning programme since its launch?

Sir Jeremy Heywood: I had one meeting before Christmas just as Oliver was assuming his responsibilities. We have not yet had a substantive meeting since he has taken over those responsibilities. The next meeting of my Cabinet Secretary's Advisory Group is in

February. The custom has been to report back to Ministers after those meetings, both in writing and orally, and I imagine we will carry on that process.

Q223 Chair: So we are on fairly new turf here.

Sir Jeremy Heywood: Exactly.

Mr Letwin: Perhaps it would help the Committee if I explain it. The answer to that is yes, but it would help the Committee possibly to know that, in parallel with this process, for the last year or so I have been running, at the Prime Minister's request, a resilience review—which David Heath will know about—which has been looking right across Whitehall at the question of the risks to which the nation is most exposed. It is not simply those that are high on the national risk register and which we cannot do anything more about than we are doing—I don't think it is giving away a state secret to refer to such things as a nuclear attack; so I am not looking at that sort of thing—but it is the things that are quite likely to happen and that we can, at least arguably, do something about: for example, like—

Chair: Like cyber-attack.

*Mr Letwin—*cyber-attack, floods and things of that sort. I have been looking in particular not at the general, but the very specific effects they can have on mission-critical aspects of our infrastructure. So this work and that have some overlap, although it is only slight.

Q224 Chair: Of course, that work extends right across just about every Government Department where risks exist.

Mr Letwin: It does.

Q225 Chair: Are you in a position to estimate how much time Government spend on horizon scanning each year and how much of it relates specifically to this new programme?

Mr Letwin: Jeremy may want to say more about what goes on specifically in each Department. I certainly don't know the number of hours that each horizon scanning grouplet, so to speak, in each Department spends. It will vary very, very widely.

Q226 Chair: A lot, a little?

Mr Letwin: I think I am right in saying that in some Departments, like the Ministry of Defence, enormously large amounts of time are spent on this sort of thing. I suspect that in some other Departments it is enormously small amounts of time spent on it—and, incidentally, I think it is right that there should be differences. One of the things I am hoping to gain an understanding of as we go through this process is whether that balance across different Departments is right. This specific exercise that we are discussing today fits into a much wider pattern of activity, including the resilience review, but also the whole compilation of the national risk register and the work we have been doing on the National Security Council over the last four years, which no doubt our predecessors in

parallel organisations were doing—all of which is, of course, supported by all sorts of work done in various different Departments. The cumulative amount of time that Whitehall spends, and has increasingly in the last four years been spending, on looking into the future and asking questions about whether we are adequately prepared in one way or another to deal with various aspects of it is very large indeed.

Chair: You referred to the risk register work. You may be interested to know that when this Committee did work on how the Government handled scientific advice in emergencies, a significant number of responses by the Government, which we now see in the modern register, reflect the views of this Committee, so we are nearly on the same wavelength on this.

Q227 David Tredinnick: Why was Jon Day chosen to lead the review of cross-government horizon scanning? Would it not have been better to have chosen someone from GO-Science, the Government's centre of excellence for horizon scanning? Would it not have been a better idea?

Mr Letwin: Jeremy may want to talk about the history. Let me just say why I think it was the right choice. It is important that somebody who is adept at thinking about the use—the customer end of all this—looks across the waterfront and asks that question. It is somewhat parallel to what I am doing on the resilience review and what Francis has been doing on cyber for the last couple of years. John's work in the JIC is specifically of that kind. He is, as you will know, precisely not part of any of the intelligence agencies. In fact, the whole reason for having the JIC is to get the perspective of the potential customer applied to intelligence reports, winnow through them and get to a balanced picture coming out of them without being captured by any one of what might, at any given time, be an agenda of any particular intelligence agency, or part of it, about which we all know there is a long history of doubts. The chairman of the JIC is peculiarly well placed to interrogate complex predictions about the future based on various different kinds of evidence, without getting captured by agendas.

The people who are doing the horizon scanning, both the small team supporting Jeremy's work inside the Cabinet Office and its many satrapies around the Whitehall Departments, including Mark Walport's much larger group in BIS—the Government Office for Science—are the people who are, in a sense, least able to judge whether it is all going in the right direction, because they are doing it; they are like the intelligence agency vis-à-vis the JIC. I think it made abundant sense to ask somebody who was adept at these sorts of things and experienced in doing this, but who was not part of the business at the moment, to look at it, and Jon Day, therefore, was a pretty obvious choice. What I don't know is the history leading up to it because I was not involved in it.

Sir Jeremy Heywood: Very briefly, that is a very good ex-post rationalisation for why I chose the right person. When I became Cabinet Secretary, I thought that one of the issues on which we were weakest across the Cabinet Office anyway was in understanding what sort of horizon scanning work was going on, what the future thinking was and so on. At an early stage I wanted to get someone from outside the Cabinet Office, who had not previously been in it, as it were, who had a bit of spare capacity, who was senior and who knew what "good" looked like—because I think the MOD do this very well—and get him

to come and review the capacity of the civil service to do this. So I chose John, partly because, as I say, he had seen a very good horizon scanning function in operation in the MOD and had been a customer of that. He had some spare capacity, was neutral, and, as Oliver says, his role at the JIC makes him peculiarly well suited as well. It was a pragmatic set of considerations, and I think it has worked out well.

Q228 David Tredinnick: Thank you. You have justified that well, I must admit, but how will decisions about which topics to consider under the new programme be made, and how often do you think new topics will be added? Is that going to be Jon Day's responsibility?

Mr Letwin: No.

Q229 David Tredinnick: Or are you going to have any input as a Minister?

Mr Letwin: Right; that is a separate set of questions. Following the production of this report by Jon Day, the need for an apparatus and process was identified. Before I go on and answer your question directly, perhaps I may say something about that, because Jeremy and I have had some quite careful discussion, including over the last few days, about this architecture.

In any of these exercises it is incredibly important to have a clear view of what you are and also what you are not trying to achieve by doing a particular thing. I mentioned what it is I am trying to do on the resilience review. We have tried to get that very, very clear, just as we have with various other such programmes, like the red tape challenge. In this case there is also a very clear view of what it is and is not trying to do. It is not trying to make a foolproof prediction of everything that is going to happen to Britain and the world for the next n decades. The history of that is littered with shipwrecks at the bottom of the sea. It is not trying to substitute for all the strategic work which needs to go on in many domains. For example, we have tried to take a view about areas in which we need an industrial strategy. Where that strategy is under way, we have created bodies, forums and so on with industries and experts to think through those issues. That is an exercise quite separate from this.

What it is trying to do, very single-mindedly and focusedly, is to concentrate on the question: how should Government and its various Departments think about the things that they are likely to be facing in the coming decades, be sure that they are operating against some kind of common understanding of those things across Whitehall and that they are developing appropriately flexible and continually re-examined responses to those things? So this is a Whitehall-centric thing and it is about the things that are likely to happen that will affect Whitehall.

The first purpose is to make sure that we identify a range of areas that we ought to investigate; secondly, having identified those areas, to get clear across Whitehall, using as much external expertise as there is around in the most transparent way, what scenarios we ought as a common matter to be planning against, not a single prediction but a set of common scenario planning; and then, finally, for each Department to think through very carefully particular things. Let's assume, for example, we were talking about the bioscience revolution that is going on. Does this affect our Department? In some cases the

answer will probably be no, not much; in others, yes, an enormous amount. Given the scenarios that we have commonly across Whitehall as possible outcomes on this, are we confident that we are doing whatever it is we need to do for our Department to respond to those properly?

Q230 David Tredinnick: Thank you; you have explained that in some detail, but how are you going to evaluate the success? How and when do you look at the programme and say, “I don’t think this is going very well,” or, “We’ve done brilliantly well”?

Mr Letwin: Well, I think there are two stages at which you can do that. The first we can do in the course of the next year and then each year thereafter, which is to ask: is Jeremy’s advisory group, and the various units around Whitehall that are responding to it, coming up with a good list of identified subjects? Has Whitehall been making progress in developing with the outside world good scenario analysis? Are Departments producing serious thinking about how they are going to deal with this? That is something we can check year by year whether all those things are happening. Ultimately—

Q231 David Tredinnick: I am sorry to interrupt you, but do you say to the people you are dealing with, “I need this by 1 October or a specific date”? It all sounds very “roll on” and friendly, but at any point do you say, “Right. I want a report to know exactly where we are by the end of the third quarter”?

Mr Letwin: Oh I see. I will turn to Jeremy in a moment, but the whole point of Jeremy’s group is precisely to make sure that these things happen in a timely fashion, and to set timetables for specific parts of the work to be done. For example, the group that reports to Jeremy has so far identified eight—it is a series of topics—to look at, and within the emerging technology topic it has identified eight plus one, nine, emerging technologies that should be focused on. Now it will fall to Jeremy’s group to develop a timetable for people to come back with reports on how they are going to produce scenarios for each of those, and then timetables by which each Department is going to report on whether it thinks it has issues to deal with, and, if so, how it is going to deal with them. All of those things we can then measure, as I say, on a year-by-year basis. What of course we won’t know until much, much later is whether, as a matter of fact, the judgments that were made and the policies that were prepared to deal with these matters turned out in the event to be wise and well-judged.

David Tredinnick: Thank you very much.

Sir Jeremy Heywood: Can I just make a couple of comments in response to those questions? In terms of the original five areas on which we focused, your question was: where did those come from? Was it Jon Day’s idea and so on? My recollection of it is that my advisory group met about a year ago for the first time. I had already had some input from Francis Maude at that point, as he was the Minister taking the most interest at that stage. Francis was keen to have one line of inquiry on emerging technologies, so that was one of them. The other four more or less came out of the discussion we had in the Cabinet Secretary’s Advisory Group of 10 or 12 permanent secretaries. This is something that I would expect Oliver and other Ministers to have input into as we go forward. Clearly, it is going to be a combination of what Jon Day and the various parts of Whitehall think we

ought to focus on, which is challenged by my group and then tested, and what Ministers would like us to work on as well. It is a combination of those things, but that is the specific answer to the question about those five.

What does “good” look like? How would we check success? When can we check success? To me, the most important thing of all in this, given that I think the quality of thinking going around Whitehall—and outside Whitehall as well, by the way—is very high, is whether we are taking from that horizon scanning some key “so whats” that are actionable in Whitehall. It is all very well to have lots of theoretical discussions about future trends, black swans and all the rest of it, but the question is: what happens in Whitehall as a result of that?

When Jon Day did his review, I think he was quite surprised in a sense by the amount of work already going on in Whitehall and the quality of the thinking. Again, I repeat that there is a lot of very good thinking going on outside Whitehall in academia, think tanks, some big corporations and so on. We should be interested in tapping into all of that, but the question for us as civil servants and Ministers is: having surveyed the horizon, which are the areas where we think policy now needs to be adjusted, or resilience needs to be improved or flexibility enhanced, in the light of this new thinking?

If we discover in a couple of years’ time that we are meeting and not discovering anything new, or it is all very theoretical and does not really change anything, we will quietly pack up and move on. I hope that won’t be the case, because to me the real test is: can we make this stuff relevant to policy and Ministers’ choices? It is just not a theoretical exercise; it has got to touch the ground at some point and change what policymakers are spending their time doing.

Chair: That is an interesting response, because when we met Jon Day he was pretty critical of the problems of silo-based government. There is a real challenge for you there, but we will come on to that later.

Q232 Sarah Newton: You have been very generous with your description of the architecture, so that has answered a lot of my questions. Listening to what you are saying, not surprisingly, a lot of this horizon scanning is about risk, threats to the UK and how we are going to prepare for those. It is not surprising as it has been very much led by the Ministry of Defence. What balance is there for horizon scanning to spot opportunities for the UK to increase our influence in the world or our prosperity?

Mr Letwin: I think, actually, this exercise is much more focused on opportunities than risks. Of course, from time to time the National Security Council focuses on opportunities, for example, in trade promotion, exports and investment, but I should have thought that eight tenths of our discussions—I have not done an analysis—over the last four years in the National Security Council have been about risks and how we deal with them, or, indeed, risks that have materialised and how we deal with them. The same is true, for example, of my resilience review, which is entirely focused on risk. The subset of that dealing with cyber is almost entirely focused on risk. The national risk register, as its name implies, is focused on risk. There are lots of analysis of risk going on. God knows we need to do more and better all the time. I don’t mean to suggest in the least that I am

complacent about dealing with these risks because I spend a lot of my time not being complacent. Having said that, this exercise is mainly about opportunities.

Let me go back to the emerging technologies theme just to make this concrete for a moment. There are these nine topics. One of them, for example, is big data. For Government Departments, what is big data? It is an opportunity that has to be very carefully managed, because there are all sorts of privacy issues and questions about making sure you do not end up with spaghetti junctions of failed computer programmes and so on and so forth. Having said that, the opportunity is immense. We are increasingly—this is one of the predictions you do not need to be any kind of genius to make—in a world in which, for various reasons, an enormous amount of data is being assembled and, indeed, is being made to some degree or other more transparent.

The question is: how can we mine that much more effectively to provide a better health service, and ensure that where people have social care needs, health needs and other kinds of needs—this comes back to the Chair's "silo" point—we don't treat them as if they were different people in different places, but rather we make use of it and where information, suitably anonymised with suitable safeguards, is used in such a way as to benefit citizens, society and our economy?

If we look at the biosciences—another element here—or regenerative or stratified medicine, which are also topics here, these, again, are cases in which there are massive opportunities across Departments like Health, BIS and DWP. The questions here will be: how far are we making use of them? Are we doing the things necessary to make use of them?

If one looks at the emerging economies, which is the second of the themes, this work is not going to be a series of analyses of how we safeguard the nation against attack from some of them. That is a National Security Council concern. Of much more importance in this context is whether the various Departments are doing whatever it is that can make use of the huge opportunities that the emergence of the emerging economies presents—a question which, at the moment, is too little asked by lots of Departments. I know that from personal experience because I spend a certain amount of my time dealing with emerging economies. The focus on the opportunities there is increasing, but it has a long way yet to go. So my answer to you is, yes, abundantly, we do need to focus on opportunities, and that is what this work will mainly want to do.

Q233 Sarah Newton: That is very reassuring. Do you see the Cabinet Secretary's Advisory Group as the mechanism for enforcing those priorities across Departments to make sure those remain priorities when the work goes back to the individual Departments? How important is the success of what you want to achieve dependent on the work that will be done within the Departments?

Mr Letwin: The answer to the second part of that question is "fundamentally." I stress to the Committee that we are not trying to build up some huge empire in the Cabinet Office of 300 people in a department of planning. Nothing would please me less.

Chair: "Yes, Minister."

Mr Letwin: There are about two full-time equivalent people sitting in the Cabinet Office helping us with this.

Sir Jeremy Heywood: I completely agree, by the way.

Mr Letwin: The work here needs to be done in the Departments. Jeremy and I have been working for four years hand in glove on an almost indefinite range of things. As we work through these things, typically we have found that some of it works well and some of it doesn't work so well. Where it doesn't work so well, very often, via permanent secretaries and, in this case, his advisory group and so on, he can cure the problem. Sometimes it involves Ministers, and then it is helpful if I have discussions with those Ministers. Sometimes the problem is that it does not involve Ministers and we need to, in which case we work together, and so on. We will simply find our way to solving problems in specific Departments if and when they get identified.

At the moment, my impression is that, perhaps because of the skilful way in which Jeremy and the advisory group have handled things while I have not been around, when I phoned around some colleagues and asked them whether they had heard about this, and whether they were enthusiastic, resistant or whatever, on the whole they had heard about it and thought it was a good idea, so we are starting at least in a good position. I think the salience of it at the moment in the minds of most of my Cabinet colleagues is less. They know it; they think, "Tick"; but we now need to make them interested and focused on it sufficiently so that we get the best out of it.

Sir Jeremy Heywood: We are now approaching a point of testing that really. A lot of work has now been done, for example, on the emerging technologies strand. The meeting I have got to chair next month will look at the answer to the question I sent them off to answer some months ago. We now need to look, having done the further work on these nine emerging technologies, at what the hypothesis is about the policy implications of those. This is an area where, hopefully, we will break down silos. For example, at the moment the Government Office for Science and Business Department, in which that office resides, are pretty well aware of these emerging technologies and have factored them into their industrial strategy thinking and so on. Other Departments are much less aware of them and have done much less thinking, I would suggest, on what the implications are for their Departments.

Part of the purpose of my advisory group convening the permanent secretaries is to bring to everybody's attention what the most responsible Department already knows and really challenge ourselves as to whether we have teased out all those implications. We will try to do that in relation to emerging technologies next month, and at that point I will be submitting it to Oliver. We may well then need a series of discussions to get Departments sufficiently interested, or they may immediately see, "Ah, in the light of this new information we will take that away ourselves," and it won't require any further intervention from us, which will be the best outcome, but it will be horses for courses.

Of course, all Departments have to prioritise. It is very, very important that they do this long-term thinking and test their current strategies against future trends, but at any point in time Oliver and I have to make a judgment as to whether we really want Departments to drop everything they are doing and focus on just the new thing, or whether we allow them to prioritise. It is a civilised discussion with Departments, but the point about having a

co-ordinated mechanism is to make sure that all Departments, not just the specialist ones, have a rich understanding of some of these trends and are then able, if it is brought to the front of their minds, as it were, to think about, “What are the implications for us?” That is how we will try to do it.

Q234 Sarah Newton: I have just one final question, with your indulgence. From our previous evidence, working with the chief scientific adviser in each of the Departments, they seem to have an extremely effective way of collaborating and sharing their expertise across Departments. To what extent will you be involving them—because all the opportunities involve science and technology—and improving people’s understanding of the possibilities of science and technology in legislation about data sharing and so on? To what extent are you going to be working with them as a group and individually within the Ministries?

Sir Jeremy Heywood: Mark Walport is himself on my advisory group, so he is centrally involved in that and I think he finds it useful to be plugged in. But part of what has gone wrong here is that the Government Office for Science over many years have done some really excellent work and very good networking among themselves, but it has not always translated into actual policy changes. Some of the Foresight reports, for example, have been of impeccable quality; they are brilliant pieces of work, really original and path-breaking two years’ worth of study and so on. Have they all had a huge impact on the way the Government think about issues? Not all of them. Part of this is about bringing the scientists closer to the policymakers and having that sort of commingling.

Having said all that, Mark is very firmly involved in our advisory group. A number of the chief scientific advisers, or their deputies, are involved in some of the work on the specific strands, and we want to work very closely with them. The whole point about this in a sense is to help them have more impact, to the extent they are thinking about long-term issues and bringing those more clearly into the policy domain as well.

Q235 Stephen Mosley: Thank you, Chair. This has been very useful and has clarified a lot of the issues that we had. When we talked to third parties, there seemed to be some confusion over the term “horizon scanning” and the differences between its use in and outside Government. Mr Day himself admitted there were differences. In terms of your perspective, what is your definition of “horizon scanning”?

Mr Letwin: We have discussed this a bit. My definition of “horizon scanning” is scanning the horizon. I am really profoundly uninterested in theological dispute about this. The thing is to get on and do it. We all know, roughly speaking, when it is being done and when it isn’t. It is about whether people are looking sensibly, intelligently and carefully at the future and making educated guesses about what might be most important and interesting about it, and then, in a systematic way, approaching the question: are we suitably adapted to deal with the uncertainties and make greatest use of the likely opportunities? If this fulfils that, whether that counts in the theology of X or Y as horizon scanning, or something else, or grand strategy, I neither know nor care.

Q236 Stephen Mosley: That is a good answer, and I will not ask any of the academic and theological questions that I had down here. I will move on to something slightly different. I

understand there is a presumption that the outputs from the horizon scanning programme will be published. Are they being published at the moment?

Mr Letwin: Ah, well now, this is quite an important issue, which we have also discussed. In the process of my taking on this task it was a question I asked very much. We have come to a settled view about this. I do not think we have said this previously, but it is a suitable thing to say to this Committee. If you have any observations on it, it would be good to let us know. Our current settled view, I think, is this. There is a distinction between the amassing of evidence and prediction or educated guesswork on the one side, and the translation of that into scenarios or possible scenarios in the future. That is one thing. On the other side is what Jeremy and I have both been talking about and that Jeremy talked about a moment ago in answer to Sarah, which is: how do you then make use of that in Department x, y or z, adapting what it is doing so that it can make a sensible and flexible response to these opportunities or threats, or whatever?

On the first of those two sides—the collection of evidence, projections and the translation of those into possible scenarios—my view is that we should be maximally transparent. We should go the last mile to make sure that these things, as they are developed, are developed with the outside world, not just in some little Whitehall encampment, making use, as Jeremy was saying, of all the extraordinarily wide range of things. Britain has a fantastic base of people in universities and corporations, and they do as much thinking and as good thinking about these things as anyone in the world. We should make use of that. Indeed, we should not restrict ourselves to making use of those things that are done in Britain; we should make use of global understanding of these things. We should make clear what we have collected and are making of it, and, when we form potential cross-Whitehall scenarios, against which we are going to ask Departments to consider whether they are relevant to them and, if so, how they will plan against them, we should expose those completely to public view so that we can achieve the advantages of crowd sourcing that we are trying to achieve across a wide range of governmental activity. The fact is that a lot of people looking at those scenarios, who are vastly more knowledgeable about some particular corner of it than anybody who has produced the scenario itself, may say, “This is very interesting, but for the following reasons I think you are completely crazy to put this in,” or, “How about considering that?” That is information we should not just allow to happen; we should use it; we should mine it effectively.

We should go beyond mere transparency into a positive programme of communication, making sure this is widely disseminated and people can comment, and that we make use of the comments and go back to them in an interactive process. That is on the information side.

Q237 Stephen Mosley: Before you move on to the next section, how and when do you expect that to happen?

Mr Letwin: Literally as the reports emerge, so as soon as Jeremy’s group gets the first products on emerging technologies. It happens to be probably the first group, but we will see who comes back first. Let’s suppose they receive something on bioscience. That material we should publish right away and then begin this interactive process.

On the other side, however, when it comes to how Departments make use of that set of scenarios and understanding of the possible futures in their policy, I do not think we can at all guarantee to be public about that. That will depend case by case on what it makes sense to reveal and not reveal. There may be things we do not want other countries to know we are planning to do, things that we do not want the commercial world to know, and things that we specifically do want the commercial world to know. There may be cases where we want to shape the market a bit by saying, “Here are the scenarios we are operating in. That is all transparent. We can now tell you that in Department x we are thinking that we might go this way to deal with it, or the range of possible outcomes for us is this, and we would like you in your planning”—“O industry around the world,” and particularly British industry—“to think how you might co-operate with us to develop.” There may be things where we want to be communicating, but there may also be things where we specifically, particularly and obviously in the field of defence and allied areas, do not want to reveal anything. Therefore, I do not want to give any commitment at all that that side of it is public. We will decide that case by case as we go along.

Q238 Stephen Mosley: On the second stage, how would you plan to monitor and make sure the implementation is going ahead?

Mr Letwin: Just as Jeremy and I do in all the other things we do, we will meet regularly, look at what is coming up and check how these communications work. I have been fostering with Francis, as some colleagues know, this huge effort to try to make sure that Government goes about its business, as far as possible, in an interactive way and makes use of behavioural insights, which used to be laughed at and now turn out to be really quite powerful, and make use of external understanding properly. Throughout a whole series of processes—for example, in dealing with deregulation—we have not done the typical thing of Government sitting around and working out what to deregulate. We have hauled in panels; we have exposed literally everything on the web; we have engaged in interactive discussion; we have discovered huge amounts of information about what regulations have what effects on whom by that means, and then we have used that information. That is exactly what we will do here, and I intend to drive that myself.

Q239 Graham Stringer: Following up Stephen’s questions, I have listened carefully to your answers to that while avoiding a definition of “horizon scanning,” but what is the difference between what you are doing looking at the positives in the future from trying to pick winners, which I think there is a political consensus that Government is rubbish at?

Mr Letwin: I would describe the difference this way. The reason that “picking winners” got a bad name was that it consisted—this is a slightly parodic description but I think you will recognise it is not far off—of somebody sitting at a desk somewhere in Whitehall and saying, “Ah, I think such-and-such is going to be a good thing. Let’s go find a subsidy to give to such-and-such.” The next thing we discovered was that it was not such-and-such; it was such-and-such’s competitor that turned out to be better at it and we had been unnecessarily subsidising the wrong item, and everyone said, “What a waste.” That is broadly what happened. This is not at all about that. First of all, as you may notice, without wishing to enter into partisan terrain, the country does not have as much money as

we might have liked to have sitting round in Government and subsidising things with, so on the whole we do not subsidise things.

Quite apart from that, the whole of the industrial strategy which Vince Cable and David Willetts have spearheaded is very different from a “picking winners” industrial strategy. On the contrary, it is trying to say, “Here are areas where the clearly emerging trend is in a certain direction. We need to make sure that Britain as a whole plays its full part in that.” For example, let’s take advanced automotive engineering. It is clear that there are various trends and Britain has various strengths. For example, we are moving towards ultra-low-emission vehicles around the world, and also Britain probably has the world’s best advanced automotive engineering in that and allied domains as a result of our participation in Formula 1, the west midlands concentrations and so on. Therefore, the industrial strategy involves making sure that, so far as possible, everyone in the world who is trying to develop ultra-low-emission vehicles comes here, does their research and development here and builds factories here. We are not picking whether this hydrogen technology, hybrid technology, or straightforward electric technology, is the answer, nor are we trying to pick this or that firm. We are saying this is a trend and we want Britain to be front and centre of it, building on its strength. That is in the industrial strategy field.

Here, in a similar way, we are not trying to say that the way in which Department x should go about responding to opportunities in big data is by discovering firm p and doling out large amounts of money to it; rather, if big data is a coming issue—and it clearly is—Department x, if it has the opportunity to use big data, needs a strategy for dealing with it, which at a suitable moment no doubt will involve, among other things, subject to OJEU rules, holding tenders, and so on and so forth.

We are not picking industrial winners, nor are we predicting the future with certainty. We are trying to identify trends that are certainly happening in the short term, looking at the extent of the possibility that they may develop further in the long term, and making sure the Departments have a flexible strategy, adjusting over time to deal with those things, that is rational in the light of the opportunities.

Sir Jeremy Heywood: Oliver has dealt with the issue in so far as you are talking about the exercise on emerging technologies. We have spent quite a lot of time on that particular project in this group. It might be worth reminding you of some of the other ones we are looking at—for example, demographic change. It is nothing to do with picking winners at all. Demographic changes seem to me very, very important. Lots of different Departments have to think about how the population of the United Kingdom is going to evolve over the next 20, 30, 40, 50 years. Are they all using the same assumptions? Who is testing whether those assumptions are right? Outside thinkers have the same view that insiders have about that, so it seems to me that that is another example where a bit of co-ordination of departmental thinking, knowledge and analytics is sensible.

Another one is that there is an emerging hypothesis that young people have different social attitudes to politics, criminality, risk taking and so on. One of the things we wanted to do was to get the best experts in the country around the table to work out whether or not there was anything in that hypothesis. Is it that, yes, this particular group of young people have different attitudes from older people, but that is only because they are young? It is not that as they get older they will keep those different attitudes. These are two themes that are a long way away from any concept of picking winners. They are not in the normal way

things that Departments would particularly focus on, and they are issues that we probably need to stress-test to work out whether there is anything in these hypotheses or trends that should cause Departments to think about whether they are prioritising the right issues. I want to underline that horizon scanning is not just about emerging technologies; it is about a whole range of different social and economic issues, and ultimately security issues as well.

Q240 Graham Stringer: If I may make a quick response to both those points you have made, on the first one it seems to me that, rather than picking firms, you are picking sectors to win. Given the Government's history on that, I do not think they could have predicted 25 years ago that one of our great strengths would be an improvement in the technology of vacuum cleaners that would have been an international winner. On demographic changes, I do not think that, if you go back 20 years to 1994, however clever the people, you could have predicted the demographic changes in this country, because nobody at that time would have predicted the large-scale migration that has taken place. I simply do not accept that you can do these things. You are much better at focusing on risks and trying to have contingency plans for those. That is a comment. If you have a response, I would be interested.

Mr Letwin: Yes, I do have a response. First of all, I completely agree with you if what you are saying is that we should expect the unexpected. Definitely we should. As a whole, Governments across time should maintain sufficient flexibilities if you do discover a whole new domain, and it happens all the time, because we should foster innovation and it occurs. Literally nobody in the world was in a position to guess that the genome project and results of it in stratified medicine would be what they are now. As to vacuum cleaners, yes, it is impressive. Stratified medicine is possibly revolutionary and is probably a thousand times, or maybe a million times, greater in scale. It is probably the most important development in medicine in our lifetimes—and possibly ever. Would we have predicted that 25 years ago? I do not know. There may have been some genius who did, but it certainly was not something that most people thought of, so this is a fantastic and extraordinary thing that has happened.

However, now, sitting here—and this is the second point I want to make—of course it could be that a year from now the whole stratified medicine thing comes to a grinding halt, but I'll bet you it doesn't. It so happens that at the MRC lab in Cambridge and in a number of other places in Britain we are just about as good at this as anybody has ever been in the history of the world, and just about as good as anybody else in the world is—in fact, I think, arguably better. We happen to have a national health service that has unified data and we happen to be leading the work on genomics. Therefore, I think it would be completely mad for Britain not to try to capitalise on that opportunity. Now, most of that is to do with what we call industrial strategy and not horizon scanning. But then if you ask the question, “Are there any implications for Government Departments from what is likely to occur in stratified medicine?”, we can certainly say that for the Health Department it has very, very considerable implications, but who knows what the implications are for other Departments? Surely they ought to be planning on the same sorts of assumptions about possible rates of development and effects that the Health Department is planning on, because it would be crazy if we had the Health Department over here planning on the assumption of x and y, and other people not following and having their own eccentric view, so to speak.

I do not think that the fact the unknown is certain to happen and we must therefore maintain extreme flexibility should preclude in any way making sensible guesses about things which really are very likely to happen, and trying to understand the modalities of them sufficiently to be able to respond in an intelligent way. That is all this process is about.

Q241 Graham Stringer: I have one last question, if I may. Why do horizon scanning advisory groups not have outsiders on them? Why is it all officials and why have the Government not published details of the membership of the horizon scanning oversight group? For instance, why is DECC not represented? There are huge, essential changes in the energy industry over the next 10, 20, 30 years, which will be very important ones. Why are they not on the Cabinet Secretary's oversight group?

Sir Jeremy Heywood: The original composition of the Cabinet Secretary's Advisory Group was an ad hominem selection of permanent secretaries who expressed an interest and had something to contribute. They were not representing their Departments but were asked to take a corporate view, if you like, but we refresh it from time to time. As the new permanent secretary of DECC beds in and gets on top of his day job, if I may put it like that, I would be very pleased if he wanted to make a contribution to the central group as well. I think that what you should be looking for is which of the Departments are working on the community of interest groups. These are the areas where the actual work on looking at best thinking and developing hypotheses gets done. The other two groups are challenge and co-ordination. I think that is the place where you should try to get outsiders. I don't rule out bringing in a couple of non-execs or some outsiders on to our group, or Jon Day's challenge group, but the area where I really want to see the external input would be the communities of interest, making sure those are tapping into the best thinking in the country and, indeed, best thinking internationally. So we are very open to that; it is just a question of what is the right point in the governance structure to bring in external experts. I agree with you that DECC should definitely be involved in some forward thinking, and I will definitely take that up with Stephen. We are very happy to publish who is on the Jon Day group. That is absolutely fine.

Chair: We look forward to seeing that change. One final quick question.

Q242 David Tredinnick: Do you think GO-Science should play a greater role in the new horizon scanning programme? How do the external networks facilitated by GO-Science, which is FUSION and the heads of horizon scanning networks, feed into the new programme?

Sir Jeremy Heywood: From my perspective, GO-Science are already playing a very good role and big part in the work we are doing. As I said earlier, Mark Walport is personally on the advisory group. One of the five projects that GO-Science led on was the demographic work. I think they are involved in quite a number of the communities of interest, so they are already playing a very full role. In bringing their input, they are obviously themselves very reliant on their networks that they have spawned and continue to nurture, which are very much part of the underpinning of the whole system. I am very

happy with it. Mark Walport is obviously relatively new; he has come in and seen this, and he likes what he sees, but if we can further strengthen those links we should do.

Mr Letwin: I also work closely with Mark on a range of connected things. One issue that Jeremy and I have discussed, which we need to take up and resolve, is the connection not so much with FUSION and so on but between the Foresight programme and the horizon scanning programme. As I understand it, the Foresight programme, as Jeremy says, typically has produced these extraordinarily detailed and serious products at quite a Rolls Royce-like pace. It purrs along and then every couple of years you get one of these great things. Some of them are fantastically practically useful. The reason, as I gather, that we have a Thames barrage—it is quite a good example, incidentally, of foresight correctly applied—is that someone thought, “Oh, golly. The sea’s rising and we had better do something about this,” and that got translated into action. There is now a Thames barrier. Incidentally, we may need another one, as some people here very well know.

I would like to feel confident—which I do not at the moment—that that programme and this new one are brought together in a way which means that in horizon scanning we make maximum use of the Foresight programme to make sure it is easily translated, but also that we feed back into it. I think I am right in saying that there are about 20 people employed in the Government Office for Science on the Foresight programme. That is quite a big, powerful and intellectually able resource, and we need to make sure that it is correctly connected with this exercise. Jeremy, Mark and I will discuss that and try to make sure that we are making maximum use of the synergies.

David Tredinnick: Thank you.

Q243 Chair: Minister, when we started the session I was slightly reticent because I thought we would hear answers akin to the other Minister for Administrative Affairs. I am pleased to see that my reticence was ill-founded. Thank you for the clarity of your answers and yours, Sir Jeremy. We would be grateful if, on reflection, you would feed in any other information that you think is relevant to this particular inquiry, which I think is potentially a useful piece of work that will help to inform both the House and the Executive. Thank you very much.

Mr Letwin: Thank you, Chair. Incidentally, if there are other questions that occur to you or other members of the Committee as you go along, write to me and I will immediately respond.

Chair: Thank you very much.