



Select Committee on Science and Technology

Corrected oral evidence: Forensic Science

Tuesday 9 October 2018

4.40 pm

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Members present: Lord Patel (Chairman); Lord Borwick; Lord Fox; Lord Griffiths of Fforestfach; Lord Hunt of Chesterton; Lord Kakkar; Lord Mair; Baroness Morgan of Huyton; Lord Vallance of Tummel; Baroness Young of Old Scone.

Evidence Session No. 2

Heard in Public

Questions 13 - 20

Witnesses

Mark Burns-Williamson OBE, Police and Crime Commissioner for West Yorkshire, Chair of the Association of Police and Crime Commissioners—APCC; Chief Constable James Vaughan, Chief Constable of Dorset Police, lead on forensics for the National Police Chiefs Council—NPCC; and Jo Ashworth OBE, Programme Director, NPCC Transforming Forensics Programme.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of witnesses

Mark Burns-Williamson OBE, Chief Constable James Vaughan and Jo Ashworth OBE.

Q13 The Chairman: Good afternoon, lady and gentlemen, and thank you very much indeed for coming along today to help us with this inquiry. Your role is quite important to us in exploring the different issues in the use of forensic science in science itself and in the criminal justice system. Would you mind introducing yourselves from my left so we can get you on record? If any of you want to make an opening statement, please feel free to do so, otherwise we will move on to the questions.

Mark Burns-Williamson: Good afternoon and thank you very much for the invite. I am the police and crime commissioner for West Yorkshire and chair of the National Association of Police and Crime Commissioners. I pick up this portfolio on behalf of police and crime commissioners and I am here today to assist the inquiry.

Jo Ashworth: Good afternoon. I have been working in the forensic science field for 30 years with the Forensic Science Service and with police forces, and now on national programmes. I am currently the programme director for the Transforming Forensics programme on behalf of the National Police Chiefs Council and the Association of Police and Crime Commissioners.

Chief Constable James Vaughan: Good afternoon. I am the chief constable of Dorset Police and I am also the national lead for forensic science for the National Police Chiefs Council. Thank you for the invite. I have no opening statement. I hope you found my written submission of some use. I am happy to take questions.

Q14 The Chairman: All your written submissions are very useful. Thank you very much. If you do not have any opening statements, can I kick off with a question, and perhaps this is directly addressed to you, Ms Ashworth? You sent us evidence about the Transforming Forensics programme—and you might want to say a bit more about it—and the question I have is: as it is financed by the Police Federation, is it entirely focused on the police or does it also provide forensic services to others, including the private sector? What is this programme, who is it aimed at and what does it do?

Jo Ashworth: I will start by explaining how it is financed. It is financed through the Police Transformation Fund, which is administered by the Home Office. The fund itself has been topsliced from policing budgets.

The Chairman: The amount is £30 million, is that right?

Jo Ashworth: It is £30 million over two years—this year and the next financial year—for this programme. The aim of the fund is to assist police programmes at a national and local level to deliver transformational change within policing. Of course, that is broader than just police forces themselves; it is the criminal justice system as a whole. From a forensic science point of view, it is the whole network of forensic capabilities, not

just those delivered within police forces. It extends to the private sector market and services and the learning that we can gain from academia and industry.

The Chairman: Who is in control of the budget? You say it is financed by the Home Office but is it overseen by a government department?

Jo Ashworth: The department that administers it is the Law Enforcement Transformation Unit, but it does that on behalf of a joint body, the Police Reform and Transformation Board. Colleagues would probably be better able to answer that particular question than I am, as they have more experience of it. I think, Mark, you are a member of that board.

Mark Burns-Williamson: It is a joint board comprising chief constables, police and crime commissioners and representatives from the Home Office. That fund is earmarked, or topsliced as Jo has said, from the overall policing budget into what are called transformation projects, but, ultimately, it is the Home Office that decides on the amount of money that goes into there.

Lord Fox: Could you give me an example of what a transformation project looks like and what it would cost on average, so we get a sense of what this programme is?

Jo Ashworth: Would you like me to explain Transforming Forensics in a slightly broader sense?

Lord Fox: Yes, because it does not make much sense to me at the moment.

Jo Ashworth: It might be most helpful if I set the scene as to why we created the programme in the first place. It is a response to risks and issues in the police and forensic world, which James will talk to.

Chief Constable James Vaughan: I wonder if I can help with that. In 2016 the Home Office published the forensic science strategy. That strategy describes a number of risks and challenges in forensics and it sets out a vision of how we should respond to some of those risks. To translate that vision and strategy into action and outcomes, we have pulled together a programme of work called Transforming Forensics, a cheesy title perhaps, but it is a very serious programme of work that seeks to address the issues that were laid out in the strategy in 2016, including things such as accreditation, problems with research and development, national co-ordination of forensic science within police and criminal justice and some of the issues that we see presented in the marketplace. That was where the programme had its origins. Jo is the programme director and she can take you through, hopefully at a high level, some of the key deliverables the programme is seeking to achieve for us.

Jo Ashworth: In response to the strategy, I was appointed as the programme director at the end of the 2016-17 period, and we did a lot of consultation with police forces, partners, academics and others to look at what a programme of work might look like. One of the biggest issues with

forensic services is the way that policing is organised. A lot of forensic work is done within police forces. There are 43 different legal entities with 86 corporation soles, so it is no easy task. We very quickly recognised that the way to deliver some benefit and transformation into this world was to start working together as a network of capability, again not just within police forces but extending to private sector and academic partners, so that we can deliver things—again quite cheesily—once for the benefit of many, rather than everybody struggling to do things separately and duplicating effort, cost and possibly doing a lot of nugatory work.

The central tenet of our programme is a concept that we call the forensic capability network, which is working across all those forensic capabilities, knitted together with a central structure, a central team and technological infrastructure that will allow them to work together more effectively, integrating capabilities and speaking as a single voice on behalf of the forensic service and the forensic network around the relationship with the market, the relationship with research and development. It looks at quality accreditation and how that can be achieved more efficiently, as well as delivering it to the appropriate standard. There is also some work around how we can build in resilience, not only with the techniques, processes and capacity but in the skills and competency of our people. That is a very high-level strategic view of what the forensic capability network idea is about, but we have started to build that capacity in the middle, starting with a forensic market engagement and industry team, which will do that very element of liaison with the private sector market, not just in the existing established one but the broader market, which is much less established and relied on, around digital forensics.

Lord Griffiths of Fforestfach: At a very high level, that was very interesting, but if I went to a local police force and there was a particular crime and I said to the officers there, “What do you expect from what you are doing?” what do you think they would say?

Jo Ashworth: I think, by and large, the local officer would be quite blind to what we are doing and, in many ways, that is not such a bad thing, because we are trying to build in resilience so that locally they can still see a forensic service on the front line. It is about building in capability. What they would say is, “Whatever the central team is doing, I want them to ensure I have the appropriate forensic response when and where I need it at the local level” but in delivering something once, for the benefit of many, they do not need to have everything at their fingertips on the front line. A good example would be crime scene investigators, and we talked about “CSI” in the previous session. They are a front-line response so they need to be in the community, working at crime scenes, but anything that relies on a digital product does not need to be on their doorstep, so digital forensic science or biometrics such as fingerprints could be done in a much more efficient way in an integrated, more centralised structure.

Q15 Baroness Young of Old Scone: You talked about the large number of police forces and the disparate structure of the arrangements across

England and Wales. Do forces generally evaluate their forensic support and, if so, what does that reveal?

Chief Constable James Vaughan: We do, but the way that forensic outcomes have been evaluated over recent years has been, frankly, quite binary. We have been collecting data that supports a previous regime of top-down performance management where outcomes around volume crime seemed more important than they do now. There is a change of culture in policing, where we now look at outcomes around safeguarding and safety more than sanctioned/detection rates. That has led to a drive in forensic science for us to measure the things that fitted in with that regime. When we go to measure and evaluate the value of forensic science, often we find data that is unhelpful in understanding the true value of forensic science. It is very difficult to measure the value of one fingerprint that stops a recidivist from committing a whole spate of domestic burglaries. It is very difficult to measure the value of one homicide case or one terror case that has been solved or resolved through the use of forensic science.

With Transforming Forensics we have undertaken a couple of studies—using the Open University and a private piece of study—to try to find new ways of evaluating the value of forensic science going forward. We have some good ideas and some good methods going forward. We collect data sensibly across the country. We collect the data that matters so we can present a better picture of the true value of forensics, to get away from this past fixation with binary numbers and outcomes.

Baroness Young of Old Scone: Does that mean that once your programme is completed you will be able to do a compare and contrast with different forces across the country to see where attention needs to be given?

Chief Constable James Vaughan: That is the hope and ambition. Jo, I do not know whether you wanted to add a bit more to the specific recommendations from the research.

Jo Ashworth: The research showed the value of forensic services to different actors across the criminal justice system but from their point of view only. It was interesting that their point of view was quite different depending on where they were in the ecosystem of the criminal justice system, which you would probably expect. Someone from the judiciary wants to see robust forensic science presented in courts in a way that is understandable, whereas an investigator wants to be able to resolve leads in an investigation, identify whether a crime has been committed and who the perpetrator is and who the innocents are, et cetera. It was not surprising, but it also showed that we do not even attempt to collect any value information through those different lenses. We do what is easy, which is counting inputs and outputs, and that has very limited value. With this programme we want to put in systems, particularly where national systems are already being developed, where the appropriate questions are asked at the right points in the criminal justice process as to whether the forensic product adds value, with a huge caveat that the product itself will not necessarily be a binary issue, because who can get

into the mind of a member of the jury when a case is presented to them? Thus we have to be realistic about the art of the possible.

The second part of the answer to that question is that we want to make sure that just as policing very effectively applies vulnerability assessments in response to crimes at the front end that we apply similar criteria through the forensic response, which has traditionally not been the case. What I mean by that is that often the amount of work that enters a forensic supply chain will eventually make its way to the end, regardless of whether it needs to be done and is valuable to that case. We want to put more measures in place to make sure there is a much more measured, proportionate and appropriate response to the crime itself.

Baroness Young of Old Scone: Is there a handy version describing your Transforming Forensics programme with work streams and timetables and outcomes that we could have a look at?

Jo Ashworth: I can certainly send you something. You might regret what you wish for.

The Chairman: If it is that big, send it to Baroness Young and we will get a briefing from her.

Chief Constable James Vaughan: It is about 900 pages.

Q16 **Lord Hunt of Chesterton:** I want to talk about the outcomes of the review. Do you know when it is going to be published? Are changes needed to ensure forensic science provision is maintained at the level required? What are the risks of a market approach? If I might add my own point: what about the services provided to the defence and the prosecution and the extreme inequality as we understand it? Perhaps you have a different view on that.

Mark Burns-Williamson: Perhaps I could start on that. We have taken part in that review sponsored by the Home Office. It has yet to be published and is still with the Ministers. The short answer is yes, there do need to be changes.

The Chairman: How long has it been with the Ministers?

Jo Ashworth: Five weeks

Mark Burns-Williamson: There need to be changes.

Chief Constable James Vaughan: I can help. Not too long, sir. The review was done over the summer. The final drafts were given to senior officials in September, I believe.

Baroness Morgan of Huyton: Recently.

Chief Constable James Vaughan: They are with the Minister now. I am not able say when the Minister plans to publish but the near future is my understanding.

The Chairman: Sorry, please carry on.

Mark Burns-Williamson: In the previous session we heard about some of the fragmentation post the abolition of the Forensic Science Service. Some of the market failures have clearly caused a lot of concern and loss of confidence within the market. For example, we have the ongoing Radox investigation into those cases—

Lord Hunt of Chesterton: Sorry, what is Radox?

Mark Burns-Williamson: It is a major forensics company.

The Chairman: To be accurate, was it Radox or a company that Radox took over?

Mark Burns-Williamson: It is an ongoing investigation into a couple of employees who have been accused of manipulating some of the samples. Suffice to say that has impacted on a significant part of the market. More recently, a company called Key Forensics went into administration, and, again James and some of my colleagues had to move very quickly to rescue that situation—and, to be fair, the Met and MOPAC acted very quickly there as well—to protect the integrity of around 2,000 cases. There is clearly an ongoing fragility around the marketplace.

Lord Fox: I am going to jump in now because that is exactly where I was going to come in. Coming from a manufacturing background, I would call this the supply chain. You have tier 1 suppliers, which are the big lads, and tier 2 and tier 3, which are smaller, and my guess is that a big bunch of your market is covered by a small number of bigger companies and then you have a very long tail. I am assuming that part of your role is to manage that supply chain. Part of that is about accreditation, and we will come to that in a minute, and the other part is the stability to which Mark has just alluded. What levers do you have available to you in terms of ensuring strategically you have sufficient capacity in the supply chain to deliver what the overall 43 services require? Secondly, what are you doing around accreditation, because accrediting the two or three or four big lads is one thing but accrediting the long tail, as we have just heard from the previous evidence, is almost impossible. What are the implications of having a service that is only partially accredited?

Chief Constable James Vaughan: I will try to answer those questions. Can I perhaps give a high-level overview of market risk, picking up on Lord Hunt's question? The question was: what are the risks of a market approach? I do not think it is the market approach but there are risks in the market.

Lord Fox: I have diverged from that question. It is more about the stability of your supply chain, for lots of reasons. Some of it is of your making because you are driving the prices down. Some of it is of its own making because of the way it was financed or whatever.

Lord Hunt of Chesterton: Is he allowed to answer my question?

Lord Fox: Of course.

Chief Constable James Vaughan: The forensic marketplace accounts for about 20% of service provision for law enforcement in forensic services. Some 80% of forensic science is CSIs and fingerprint experts

and people we employ in-house. The marketplace tends to provide services such as DNA and some other specialist science, as you have heard from colleagues in the room today. Overall, that market is a niche market in its own right. It started in 2012. We were spending about £120 million in that market. That market today, by the market's own assessment, is something like £55 million. We think we spend a bit more than that. It is a niche market that has halved in size and policing has been quite ferocious with its procurement activity to drive a really hard bargain. Years ago we were not very good at that. Eight years of austerity have driven those kinds of disciplines into people like me and Mark very well.

The Chairman: Could Lord Vallance interject at this point?

Lord Vallance of Tummel: To jump in on this, would it be fair to say that the squeeze on the market that you are talking about would also have occurred had it not been a market but been part of the public sector? In other words, the squeeze is to do with the reduction in resources available rather than demand; is that fair?

Chief Constable James Vaughan: That is partially true. Certainly there are fewer resources to go around so police procurement practice has become keener and keener. I need to be fair to the forensic service providers that we have worked in partnership with now for a number of years because they have enabled policing to drive out cost in partnership. We are spending half the amount of money, performance is better—we are seeing quicker turnaround times—and quality is better, because all the large forensic companies are fully accredited, unlike, I am sad to say, all of policing in some of the disciplines. If forensic science had remained in public ownership, austerity would have meant changes and savings would have had to have been made, and I am sure somebody would have taken over and driven efficiencies. I think the market has been a good vehicle to drive those efficiency savings.

As the national lead for forensics, how do I ensure that the supply chain remains sustainable? This is an area of business that cannot be allowed to fail. It is an obvious point, I know, but we are so heavily reliant upon forensic science to bring about criminal justice outcomes, at every level, right up to terrorism, that it cannot be allowed to fail. The 43 chief constables across the country need access to those services.

There are three large suppliers—one very large, one medium sized and one that just about gets into the top three—and then a whole chain of very small suppliers. You have met one of those suppliers this morning who is almost a one-man band. The way policing procures services varies. Part of our work with Transforming Forensics is to bring better consistency to procurement practice. What has evolved over the last six or seven years are, broadly, two models of procurement. One is a partnership managed service model where a large provider—and really only the large providers can operate in that space—works very closely with a police force or a police region, and in some cases those regions are 20 police forces, and they work in a managed service way. Most people

understand what a managed service is.

The other model that has evolved is a commoditised market where unit cost is the king and there are penalties and quick turnaround times. It feels very competitive and if you were dealing in anything other than forensics, it is exactly the market model you would advocate. In forensics, I think history will show us that that commoditised model has forced the suppliers to a point where they are competing so heavily on price, and the contracts are so big and they come round so infrequently that when they bid for work, there is a fear they will lose the market share and bring their prices right down to, in my view, an unsustainable level.

It is not for me to provide analysis here on why Key Forensics went into administration, but I am sure that was a factor. It is certainly what I am told from other parts of the industry. That is a real problem for us. What will most likely happen over the coming months and years is there will be a pricing restructure. The market is not sustainable with the current pricing structure. All forensic providers are telling me that privately and publicly. If you bring them before the committee, I am sure they will share their views with you. There is a pricing structural problem that we need to fix quickly.

The Chairman: Lord Fox, that goes to your question; would you like to ask it?

Lord Fox: I was waiting for the next bit, but what is the process of that restructuring? Do they just come back and say, "We are going to put our prices up"? They cannot form a cartel to do that, so how do you help them, because it is not in your interests for them to price themselves out of the market?

Chief Constable James Vaughan: One of the urgent things that we are doing in response to the Home Office-commissioned review, and of course I am not at liberty to talk about the detail, but I am at liberty to talk about the work we have got on with that could not wait for the Minister's final sign-off: with ministerial permission, we have got on and built new capability within policing which is the forensic market engagement and industry engagement teams—a great title. They are there to do market intelligence and engagement for policing, which consists of 43 different police forces that often collaborate on forensics; to give a single voice to the market, and to give the market a better understanding of future capability needs, market attitude and direction of travel.

There are three people already in the team. The manager of the team is under recruitment. That team will help us work very closely with the market to negotiate how that pricing restructure should take place. That could be one of two things. It could be that we allow contracts to run their course and re-tender. I suspect that we will have a conversation and some negotiations outside of that.

The Chairman: Lord Fox, do you want to move on to some other point?

Lord Fox: We talked a bit about accreditation and your view is that the key big ones are accredited. How do you get the smaller companies accredited? You also intimated that internally in the police forces there is a problem around accreditation. Perhaps one of you could pick up on that as well.

Chief Constable James Vaughan: On the key disciplines such as DNA analysis and some of the high-volume processes, it is a pre-requisite to have those standards and you will not win a contract unless you have them.

Lord Fox: It is the niche stuff that seemed to be the issue around accreditation.

Chief Constable James Vaughan: Some of the niche providers would say there are some disproportionate costs in achieving accreditation. It is very expensive to get accreditation, which is probably why some chief constables have not got their finger out quickly enough. The smaller providers struggle to justify the cost, with no guarantee of work being given to them, because the contracts often are won by the larger companies.

Lord Fox: One solution is that you allow them to be not accredited, so do you bully them into becoming accredited or just do without them?

Chief Constable James Vaughan: That comes back to the procurement discussion that we have with providers. It is a two-way street with providers. If there is a need for a pricing restructure, which I am told by providers there is, and I accept that, there may be an opportunity for me to negotiate terms where subcontracting arrangements could be looked upon differently to help the smaller providers.

Lord Fox: So that it comes through the proverbial tier 1 rather than directly to you.

Chief Constable James Vaughan: Yes. We need the Dr Harrisons of the world, even though he might do only 50 cases a year. It is very difficult for companies to be viable when they are used so infrequently. Forensic science in policing and criminal justice requires them, so there has to be a better relationship with niche providers.

Lord Hunt of Chesterton: You still have not answered my question about whether you are dealing with the defence as well. All you are talking about is the prosecution; is that right?

Chief Constable James Vaughan: My understanding is the defence are fishing in the same pool. We do not have defence companies. We have a range of individual experts, often academics, who will be a defence expert in one particular very niche field but, generally speaking, the defence access the same pool of scientists we do. Take fingerprints for instance, there are a few fingerprint experts on the circuit providing defence evidence.

The Chairman: Because you are concentrating on police forensics, presumably we will get that evidence about the defence side when we have evidence from the private sector, because they are the same people

providing evidence to you and them; is that right?

Chief Constable James Vaughan: To the prosecution and the defence.

Jo Ashworth: I can perhaps help a little but you will probably need to ask them directly. One thing we need to bear in mind, and it was not mentioned in the previous evidence, is that through the Criminal Procedure Rules we have rules around the way that cases are managed and evidence is managed through expert witnesses. There are procedures now where expert witnesses are required to discuss and agree evidence prior to the court process. It is only the issues that are presented to the court rather than the evidence that is agreed. While I cannot give you any statistics, and I will not say that there is necessarily a level playing field for sole defence providers, what you will probably find is that the evidence is agreed and so you do not necessarily see the adversarial defence scientist versus the prosecution scientist. The expert witness process is very well laid out in the Criminal Procedure Rules.

The Chairman: Thank you for clarifying that.

Lord Fox: To close on the in-house part, you mentioned that some chief constables have been slow on this: how slow? Will they make the deadline or will we find big lumps of the police force that have not been accredited within their own forensic services?

Chief Constable James Vaughan: Sadly, no, not all police forces or regions will meet the accreditation standards in the full range of disciplines within the timeframe set by the Forensic Science Regulator. I am not here to make excuses on behalf of my colleagues, but I will provide some explanation as to why we have not fully accredited the police service. The first thing to say is that we are underinvested in accreditation expertise in policing in England and Wales. In addition to that, we have tried poorly—and this is something else that will be addressed by Transforming Forensics—to do it 43 different ways. When you have a small capability and you try to do it disparately, you make slow progress, and when you are underinvested and you make slow progress because you do it in a disparate way, the likelihood of reaching those deadlines is slim.

I have reassured the regulator on numerous occasions. I have taken over this portfolio within the last six months and we have a dedicated deputy chief constable who leads on standards for me. He runs a police quality and standards group—and the regulator sits on that group—and he drives the activity and tries to influence police and crime commissioners and chief constables to work harder towards accreditation. That work has accelerated over the last six to 12 months. In fact, we have stepped up and we are now—and sorry to use police jargon—using a Gold steering group. It has got to the point that we have said it is so important, and the deadlines are coming and going without accreditation being met, that it needs strategic leadership at a national level to drive the activity, and strong ministerial direction. Only yesterday I had a conversation with the Minister and Mark Burns-Williamson around this issue.

The Chairman: We are going to move on now because time is limited.

Q17 Lord Kakkar: To turn to the role of the Forensic Science Regulator: what should it be? Should the regulator have statutory powers and, if so, what should those be? On the failure to achieve accreditation, does that potentially raise concerns by the regulator with regard to the safety of criminal prosecutions based upon forensic services that are not accredited?

Chief Constable James Vaughan: We are working at risk in some areas already. It is probably fair to say that a good deal of forensic services provided by the police are fully accredited—DNA, fingerprint enhancement, et cetera. There are a number of new areas of accreditation that we are expected to reach. The deadline on fingerprint comparisons was October and we have not reached that across the board. We have CSIs coming online, fire investigation and collision investigation, and all that is now working at pace. The risk of not being accredited is already manifest, in that if you obtain evidence from a non-accredited scientific source, you have to make those disclosures to a court head and give the defence community and the trial judge the opportunity to assess whether that impacts upon the admissibility of the evidence. That will continue. Section 78 of the Police and Criminal Evidence Act is about unfairly obtained evidence. Trial judges will need to assess in the future, where evidence has been obtained in an uncredited lab, whether that should be admitted. That is one risk. Another risk is that of judicial review. That is a lively risk that we would face. Of course, there are risks of quality failings and miscarriages of justice as well, which is why the standards have been brought in and why the bar continues to be raised, in my opinion, appropriately.

Lord Kakkar: What is the role of the regulator and statutory powers in all this?

Chief Constable James Vaughan: The regulator, as the previous witness said, is here to hold me and my colleagues and the forensic providers to account in meeting standards. I work very closely with Dr Tully and she does that very robustly. I think it is the Government's full intention to give her statutory powers. Those statutory powers would enable her to take enforcement action against chief constables or private providers who have been slow or failed to reach accreditation. That is broadly welcome in the policing community.

Lord Kakkar: What is the timescale for that?

Chief Constable James Vaughan: I do not know the timescales. I know that there is a strong commitment from the Government. A Private Member's Bill has failed recently and legislation is moving forward. I am sorry, I do not know the actual timescales.

The Chairman: Do you agree that it would be a good idea to make them?

Chief Constable James Vaughan: Yes, I do.

Q18 Lord Vallance of Tummel: Can we concentrate on digital forensics for a moment? It seems to be the growth area for the future, partly,

presumably, because of the increase in cybercrime, and because there will be more and more evidence in digital form in other types of crime. What is being done to make sure that police forces have the right skills in place to handle all this? Is the training part of the Transforming Forensics programme?

Jo Ashworth: Within the programme we have a specific project around digital forensic science. I stress the word "science" because that helps us to define the scope of the work that we are doing without us straying into the areas of investigation and intelligence analysis. That is where the risk is if individuals step outside their boundaries of expertise. The programme recognises that digital is a huge beast and it is not going to be easy to address, nor is it something that we can bite in one piece. We are building a business case, looking to the future as to how we build a technology road map, and understanding the digital technology landscape and the change in crime, and the response to that from a digital forensic science point of view.

The specific answer to your question is about understanding the competencies and skills that are required in response to that. What I will say is, clearly, that is not an easy thing to find a solution for, not least because, and I think it was mentioned earlier, you are more likely to get a receptive trainee straight out of university than from the policing family in general. We need to think completely differently about how we get those skills and nurture them.

My personal view, and it is one I am trying to inject through the programme, is that we need to have far more partnership with industry and academia, but industry in capital letters in my view, because that is where our skills end up when we train them, and that is possibly where we can get more impact on the world in which we live. They would benefit from law enforcement experience whereas we would benefit from their ability to go a leap further ahead with extra investment and oversight, particularly in the financial sector. That is a personal view. It is something that we aspire to. We are building a business case on how we will build digital forensics for the future.

The Chairman: You are throwing up a lot of questions. I will let Lord Vallance finish and then I will go round the table.

Lord Vallance of Tummel: I was going to ask you a specific question on this. Cybercrime, almost by definition, is independent of geography whereas police forces are obviously geographically based. Does this cause you a problem and, if so, how does one solve it?

The Chairman: Please be brief because we have several questions still to go.

Chief Constable James Vaughan: It causes us a problem. We have overcome it by ensuring that we have some protocols in place whereby the police force where the victim resides is the police force that picks up the crime, whether it was perpetrated in Iceland, Russia or Newcastle. We have worked our way around that. As you say, cybercrime does not

respect boundaries. The investigation has to be anchored somewhere and that is where the victim lives. That is how we get round that.

Baroness Morgan of Huyton: I know this is my lack of understanding, but can you help us understand the difference, or the boundaries, between digital forensic sciences and the digital analysis that presumably is embedded in teams in police forces? Where exactly is the boundary in that?

Jo Ashworth: It is a really difficult one to answer in black and white terms. You would probably expect me to say that it depends. I am running a programme and thus being specific about deliverables and direction of travel is really important. We are trying to define our scope through the application of the forensic quality standards. Where a forensic process in that digital supply chain requires accreditation, that would be within the scope of our programme. It is a huge trajectory ahead in terms of progress. Data-mining, as in recovering data from devices, and how we present that back to the investigator will be a forensic process, but analysis of that process and the inquisitive nature of the questions that are asked of it at the beginning of an investigation are outside the boundaries.

Baroness Morgan of Huyton: That makes sense, thank you.

Lord Fox: Dr Morris was very clear that they are being asked the wrong questions in terms of digital forensics. The other evidence we have heard, and I think you were sat in the room, is that in the old days there used to be a forensics expert sitting inside the investigation, in a sense advising what questions should be asked. I am not suggesting that that is where you go back to, but how do you reproduce the educated purchaser that you need to be to be buying the right help at the right time?

Chief Constable James Vaughan: I am not sure we have gone as far backwards as some of the previous witnesses mentioned, because some of the contracts we have with the major suppliers in particular give us access to scientists on the ground. In some areas, in Mr Burns-Williams's force area, scientists co-habit within the same building as police officers. We have access to specialists who will come out and advise senior investigators at crime scenes on the ground. We call it something different and it is done through a different procurement model but, essentially, we have that same access.

Jo Ashworth: In the digital world, in addition to that, there is a role and capability that is recognised in policing called digital media investigators who are, in effect, those Byford scientists for the digital world.

Lord Fox: They are in-house, are they?

Jo Ashworth: They are often civilian staff within police forces.

Mark Burns-Williamson: There is a huge capacity issue with the volume of mobile phones, tablets and desktops. There is a real cultural shift needed in terms of the investigative skills that are required within the service.

The Chairman: Who is this business case that you are developing, Ms

Ashworth, addressed to? Who is it for?

Jo Ashworth: Again, that is an interesting question. We are putting some structures in on the ground to help with the here and now, but the business case is really what we are trying to build. If I were to lay that in front of a body today, it would be the Police Transformation Fund, the PRTB process we discussed earlier. Our understanding is that will end in March 2020, which is when our current funding runs out. That question is to be answered in the meantime in terms of how we look at police transformation going forward.

The Chairman: The comments that we have heard and what you have just said suggest to me, first, that we as a country are weak in terms of digital forensics because we do not have a proper strategy for how to develop and use digital forensics, and it is not driven centrally by the government departments at all. You are developing a business case quite independently that you hope will become part of the transformation programme or sit aside on its own. We heard in the earlier session about academia and how many academic departments are currently involved and it sounds, from what we heard from Dr Morris, as though it is not many. There seems to be a big gap in any strategy related to digital forensics and yet it is a growing problem. Am I summarising that correctly?

Jo Ashworth: I would agree with most of that. We are not developing a business case independently. It is supported by broader policing and it is supported by funding from the current PTF fund. That is not to say that there will not be alternative arrangements for funding transformation post the current arrangements. Mark will understand this better than I do. It is a yearly cycle.

Mark Burns-Williamson: We operate within Treasury spending rules like everybody else, but you will know sometimes that is very unhelpful because you have to plan.

The Chairman: If we were going to make a recommendation about this, who would we address the recommendation to?

Mark Burns-Williamson: There is some ongoing work in the wider comprehensive spending review for policing, but, clearly, this goes well beyond policing. It goes into the criminal justice world and there needs to be a considered recommendation from the review that we spoke about earlier, which we cannot go into too much detail on today, around making sure that is an integrated submission around this wider research and development piece that we need to bring in to this work as well.

The Chairman: Thank you very much. Lord Borwick.

Q19 **Lord Borwick:** When it is investigating crime, the needs of the police from forensic science could be different from the needs of the criminal justice system when it is prosecuting it. Is there a difference in needs and how do you reconcile them?

Chief Constable James Vaughan: I am not sure that is a problem. The criminal justice partners are the Crown Prosecution Service, and more

often these days the trial judge, and the police. When somebody has been charged with an offence, the case management tends to be joined up between the two. The forensic work that is required as part of the prosecution is done in a collegiate way and is not led just by the police. The prosecutor may ask for further work to be done. Indeed, the judge may sometimes give directions, certainly on timings of work being done. I do not see competing needs within the criminal justice system for forensic services.

Lord Borwick: It may be a difference of emphasis rather than a difference of process.

Chief Constable James Vaughan: There is often a difference in emphasis between what the budget holder thinks is necessary and what the prosecution wants to be done. They may want 50 tests done and the police budget holder might say, "Let's do the first 25 and see where we get". There might be a different emphasis there and that is more to do with who holds the budget and who is accountable for that. Broadly, we are trying to achieve the same thing, which is a search for the truth rather than an old-fashioned mind-set of case-building by the police.

Jo Ashworth: As Lord Fox pointed out, the needs are different depending upon where you are in the forensic science supply chain. It changes over a lifetime and that is why it is really important to have more of a partnership approach, not only with the criminal justice system but with our forensic private sector partners, and we welcome even closer working relationships with them, I would suggest.

Lord Hunt of Chesterton: I would go back to the important point the Lord Chairman made about the UK's forensic science, digital forensics, artificial intelligence and all that. The question was asked whether you have some connection with the new computer centre in London. All this has happened since the original forensics centre was privatised, but it is a great national facility now that we have in the Turing Institute, and I wondered whether that was something you are looking into or whether there is some equivalent initiative. It is a very important possibility and, as I was saying, it is not just the crime; it is the business of modelling and matching the whole of society. It is a rather fascinating development. The Government are suddenly spending money in the Turing Institute and I am just wondering whether this would be a good place to get some money for yourselves.

Jo Ashworth: It would be great to knock on the door and get it, that is the first thing to say, but I suspect the broader cybercrime portfolio within the NPCC has a closer connection with that centre than the digital forensic science element that we look at. Having said that, I do not think I had quite finished answering your question, because there are some excellent pockets of activity around the country around digital forensic science, both at the mass processing level and at the higher end of more complex examinations, in the National Crime Agency, the Metropolitan Police and other forces. Part of the purpose of my programme is to sweep up that good practice and see if we can share it through the single forensic capability network concept.

Lord Fox: On that, this seems to be more the domain of the service than universities. We heard, as the Chairman said, a very short list of universities that seem to be active in it. What you have just described is a scenario where, essentially, public sector organisations seem to be picking up the mantle on that. Is that the case?

Jo Ashworth: They do currently, but we recognise that there is a private sector requirement here. We tend to use private sector suppliers on an ad hoc basis when the capacity within the police service is not sufficient, but it is not the best relationship and it does not manage their ability to plan capacity.

Lord Fox: So the bulk is in-house.

Jo Ashworth: Yes

Chief Constable James Vaughan: One problem with digital is it is growing so quickly, and the piece that we are looking at is digital forensics. Trying to signal to the marketplace and the users in policing the best direction of travel and whether we should build further in-house capability or signal to the market that we are going to rely on the market in the long term are things we need to set out in a clearer strategy, because at the moment neither is invested in sufficiently. My private view is this is a place for the market to grow and policing to retract, because the market has proven very capable of delivering good services in traditional forensics, and I am sure it will step up in this as well.

Lord Vallance of Tummel: You seem to be suggesting that the issue here is as much a shortage of existing forensic skills and resources in the right places as a shortage of funding of research into forensic science. Is that right?

Mark Burns-Williamson: It is a combination of both, to be quite honest.

Chief Constable James Vaughan: It is both.

Q20 **Lord Mair:** My question follows on from what we have already been discussing. In the National Police Chiefs Council written evidence you talked about the forensic capability network having an R&D role specifically to develop a long-term capability and technology road map, which is the phrase that you used. That involves, as I understand it, partnerships with academia and industry. Can you say a bit more about that? What kind of partnerships do you envisage? You have talked a little about universities, but by industry do you mean the private sector?

Jo Ashworth: Yes.

Lord Mair: By that do you mean private sector forensic companies? What do you mean by industry?

Jo Ashworth: The whole breadth. As the previous individuals said, there is a broad range of forensic science, and, particularly in the academic area, forensic science as a particular discipline is not recognised. It is an application of science that comes with biology, engineering, computer science and all sorts of other things. They are the sorts of relationships

that we need to nurture. Our view is that there are pockets of activity going on in policing and out of policing, however, they are in isolation and not shared or co-ordinated. There is probably still not sufficient investment in those areas, but there is some, and we are just not capitalising on it. The idea of the forensic capability network is to start co-ordinating that and be the single voice to signal to the market where our requirements are. We do not even have a single set of policing and law enforcement/criminal justice requirements of the market, be it research and development, innovation or other services, and that is the first place to start.

The final part of that is we want to introduce into our forensic capability network the role of the chief scientist. It could be a tenured role. We want someone quite eminent who has the ability to make sure that science is at the fundamental basis of everything we do.

Lord Mair: To what extent do you envisage blue-sky research being part of this long-term road map?

Jo Ashworth: In the road map there will be a complete spectrum from blue-sky research all the way into market-ready. There is a recognised road map between those two in terms of readiness as you go from blue-sky research through to implementation and all sorts of other areas. We will concentrate on each step. It is difficult to manage blue-sky research because it comes out of left field, so it is more about understanding what is happening rather than managing that end of the spectrum.

Lord Mair: Do you think it is getting more difficult to get funding for that end of the spectrum, for blue-sky research?

Jo Ashworth: I do not think it is going to be easy, and so the answer to your question is yes. Having said that, we need to be more innovative in how we attract funding. The Home Office has set up a body called the science and justice forum, which is a collection of individuals from the judiciary and all sorts of other actors from across the criminal justice system and academia. The aspiration is to use that forum as a clearing house for ideas and possibly to attract funding. It remains to be seen whether that is successful.

Lord Fox: A lot of the blue-sky bit is people developing new measurements and new ways of doing things without necessarily thinking of the forensic world. How do you communicate to that world of process development and measurement development the needs of the forensic industry so all of forensic is part of your life?

Chief Constable James Vaughan: That is a really good point because, as many people will know, DNA technology was invented in medicine.

Lord Fox: Exactly, it was not intended for you.

Chief Constable James Vaughan: The science and justice forum is a good step in that direction. Getting membership of that board from across disciplines and sectors is going to be the key to ensuring that we capitalise on good research in other sectors that probably were not

thinking about forensic science when they were developing that particular piece of research. That is a really good point.

The Chairman: If we wanted to make one recommendation that would bring about the co-ordination of good forensic science and the good use of that evidence in the criminal justice system and a strategy to do that, what would that recommendation be?

Chief Constable James Vaughan: Goodness. I think regulation and the move towards statutory provision for the Forensic Science Regulator is a really good place to start, because forensic science has been rocked by a number of issues, and public confidence in forensic science must be at the forefront of what we do. That is a really good place to start and I know that there is a commitment to bring that forward. What is your wish?

Jo Ashworth: You might not be surprised to hear that my wish would be that the concept of the forensic capability network becomes a recognised brand and the voice of the service, not just for policing but across the whole criminal justice system for forensic science. A lot of the solutions lie in that single voice and the communication to industry, academia and others.

Mark Burns-Williamson: For me it needs a bit more direction from government on some of these things because—

The Chairman: What kind of direction?

Mark Burns-Williamson: Clearly, we have talked about fragmentation and some of the strategic issues within the market. In order to make some of this happen, clearer directions from government around investing in this capabilities network, around accreditation, yes, in terms of statutory responsibilities for the regulator as well; there is a package there that needs to be driven through.

The Chairman: Thank you all very much indeed; it has been a very interesting session. If after reflection you would like to send us some added information on any of the questions, please do so, because it would be very helpful. Thank you for today.