



Northern Ireland  
Assembly

Committee for Enterprise, Trade and  
Investment

# OFFICIAL REPORT (Hansard)

Life and Health Sciences Sector: Invest NI

21 October 2014

# NORTHERN IRELAND ASSEMBLY

## Committee for Enterprise, Trade and Investment

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**Members present for all or part of the proceedings:**

Mr Patsy McGlone (Chairperson)  
Mr Phil Flanagan (Deputy Chairperson)  
Mr Steven Agnew  
Mr Sydney Anderson  
Mr Paul Frew

**Witnesses:**

Dr Samana Hussain-Brannigan	Invest NI
Mr Sam Kinghan	Invest NI
Ms Grainne McVeigh	Invest NI

**The Chairperson (Mr McGlone):** With us from Invest NI to brief the Committee are Ms Grainne McVeigh, head of life sciences, electronics and consumer products division; Mr Sam Kinghan, research and development executive; and Dr Samana Hussain-Brannigan, technology executive. You are all very welcome to the Committee. Thanks for coming along. We received your papers for this only yesterday. When were they sent to the Department?

**Ms Grainne McVeigh (Invest NI):** When was the actual briefing, sir, sent up?

**The Chairperson (Mr McGlone):** Yes.

**Ms McVeigh:** It went up on 9 October.

**The Chairperson (Mr McGlone):** 9 October.

**Ms McVeigh:** Yes.

**The Chairperson (Mr McGlone):** Right. That is obviously another issue that we will have to take up, particularly when it comes to Invest NI documentation. This is no fault of yours, obviously, but we prefer to have the documentation well in advance of the Committee meeting so that members can peruse it. Clearly, there is some sort of a glitch in the Department, where papers are being held up, withheld or whatever it is. You are doing your job in getting them over, but clearly somebody else is not getting them to us promptly enough.

OK. Thanks for being with us. A lot of your stuff is quite technical, and a number of Committee members — unfortunately, none of them is with us just at the moment — were out in the States to see at first hand the things that you are talking about. Give us an overview initially. Who is front-running?

**Ms McVeigh:** I will do it.

**The Chairperson (Mr McGlone):** Give us a bit of an overview and insight into what you are doing, and then we will have a Q&A session with members.

**Ms McVeigh:** Absolutely.

**The Chairperson (Mr McGlone):** Please continue.

**Ms McVeigh:** We were asked to prepare an overview of the health and life sciences sector in Northern Ireland, looking at two things in particular: the impact and what Invest NI is doing, particularly, and the Department of the economy is doing.

Those of you who were in San Diego and at BIO will know that the health and life sciences sector is, by any definition, huge. It is a £900 billion industry across the globe. It splits easily into pharma, medical devices, industrial biotechnology and digital health, which can also be called connected health or e-health or any of those areas. Each of those is growing. As a sector, this is growing at between about 8% and 10% per year. That is very much because of what we know and see around us. We have an ageing population; there is an increase in chronic diseases; and it is more and more necessary to get health right and to get the economics of health right.

The key markets in the life and health sciences sector are the US, Japan and Europe. In Europe, there are main drivers in Germany and the United Kingdom, all of them big players. The United States is probably the world's largest source of foreign direct investment (FDI). You will know the names of some of the top companies in the world — people like Pfizer, Novartis, Takeda, Roche and Merck. These are massive giants, and all those companies have R&D and investment locations right across the world.

The impact in Northern Ireland is that this is a key sector for us, as was underlined by the NI Executive. We have about 130 companies in the sector. The good news about that is that they generate about £900 million in annual turnover every year. The better news is that about 80% of that is in exports. This sector is one of Northern Ireland's star performers. The even better news, from a Northern Irish point of view, is that some of the big players in this sector are indigenous Northern Irish companies, such as Almac, Randox and Norbrook. These are global leaders that are headquartered and were born here.

The sector here employs about 7,500, which is 2% of the Northern Ireland private sector. As I said, exports are key, and some of our companies reach up to 140 countries across the world. If you think of that as the economic or the industrial and commercial side, the other element of the health and life sciences sector is, of course, health. The Health Department, right across the board in Northern Ireland, employs about 66,000 people — 9% of total employment in Northern Ireland. It has a budget of £4.8 billion, of which £2.8 billion is recycled within our economy, and that is a good thing. Importantly, as well, it has an R&D spend of £12 million per annum. We will come back to R&D, because we want to talk about three elements: one is the employment in growth there and how life sciences can be a driver for innovation in Northern Ireland and for R&D spend.

That brings me to one of the key areas. We have global leadership in certain areas — diagnostics, oncology and connected health. We can talk about what we are doing in those. The other thing is that our universities are massive players in this area. They have great expertise in things like medicine, pharmacy and the life sciences subjects. They also have about 1,000-plus researchers in centres of excellence across Northern Ireland and invest somewhere around £50 million a year in life sciences research and R&D. All of this is linked. In our world, we very much see this from the economy and commerce side. However, if you think about it, this also impacts on health and wealth in Northern Ireland.

I have talked a little about the wealth side. The health side is that we can also see areas where we can bring innovative clinical trials to Northern Ireland. We have a supporting infrastructure that allows that in our Department of Health and in our health trusts *[Interruption.]*

**The Chairperson (Mr McGlone):** Sorry about that. That is just advising us that the plenary session will start in five minutes.

**Ms McVeigh:** OK.

**The Chairperson (Mr McGlone):** Just continue with your life sciences there.

**Ms McVeigh:** Will I just continue?

**The Chairperson (Mr McGlone):** Please.

**Ms McVeigh:** The key thing for us is to look at not only what we can do on the economic side but what the patient outcomes are. Can we drive research? Can we drive companies? Can we drive impact? Can we make an impact in our industry so that, in turn, we can drive better patient outcomes for people in Northern Ireland?

We think that we have key strengths that we can sell. Those of you who were at BIO will have seen how we position ourselves. We have some innovative, if not unique, things and are well placed across the world in demonstrating things like an integrated healthcare system. We have a manageable scale and are small enough to manage it but big enough to have an impact. That is important. If you are a huge company that wants to come here and touch the various parts, you can do that here.

We also have a connected system. It is easy to reach government, industry and academia. That collaboration between all three is critical when we position ourselves across the world. That access also allows access to clinicians and patients. Companies that are looking at investment can look at accessing government funding, the delivery within industry, academia, clinicians and patients.

We have strengths in stratified medicine, drug and device development, clinical trials, connected health and data analytics. We are happy to explain and talk about each of those.

There are also multiple players. This is a very vibrant centre with a lot of stakeholders and people working in this area who support different elements. Obviously there are the universities, the Department of Health itself and centres of excellence. There are also integrated and collaborative networks that work together. There are a lot of those. The key for us in all of this is the cohesion in bringing together a life sciences and health strategy. DETI has established a MATRIX panel to look at our capability and look forward to the strategy. I will come to that in a minute.

Invest supports companies right across the board — helping them with R&D, exports and locations, creating collaborative networks and even help with funding. We deliver both selective financial assistance and R&D and we can also talk about that. In the last few years, we have seen the sector's turnover grow by 15%, employment has grown by 8.5% and the R&D spend had increased by 11%. The key and impressive thing about the sector is that it has grown in the last few years whilst we have been undergoing a recession. That has been driven by global companies that are headquartered in Northern Ireland like Almac, Randox and Norbrook. It is a success story.

As I mentioned, the strategy is being undertaken by DETI. I think that some of you received some information about that at BIO. That is being undertaken to look at the capability and to say two things. What can we do? What is going on here? Where are we strong? What are our weaknesses? What are the opportunities out there, but also what are the threats? How do we need to come together? We think that that will be developed between November and December — in your briefing, I think we have said November 2014, but we were at a meeting just last week and we think that it will be towards the end of the calendar year before we will see that. That capability study will allow DETI, us, academia, our research institutions and our Health Department to see how we can join the dots and create a joined-up approach to deliver an impact on both health and the wealth of our economy. That is where the next stage of that will be: understanding the capability, from this report towards the end of the year, and then developing the strategy, which will be overreaching from the point of view of both health and wealth to drive economic change and more success in the life and health sciences sector. That is it.

**The Chairperson (Mr McGlone):** Thank you. Who commissioned the report you mentioned?

**Ms McVeigh:** DETI and the Department of Health. It is a joint report. It will be done through the MATRIX panel, and MATRIX is chairing it. It is a MATRIX foresight study.

**The Chairperson (Mr McGlone):** OK. Thanks very much for that. Before we get into the overall questioning, was the decision by Randox to go to Tír Chonaill — Donegal — a miss for Invest NI?

**Ms McVeigh:** No. As I said, Randox is one of our international globally successful companies. It has facilities in India, the US, England and the Republic of Ireland. It has expanded each of those facilities in the last few years to grow its global business. Like any global company, it makes decisions based on its global needs. For example, it recently bought somewhere in Manchester and is expanding a toxicology lab there. We see that very much as part of its overall global strategy. We are working very closely with Randox. In fact, we have several things ongoing with it at the moment. We do not see it as a loss. Frankly, we are delighted to see a Northern Irish company doing so well on the global stage.

**The Chairperson (Mr McGlone):** So it is nothing to do with additional red tape in the North or anything like that.

**Ms McVeigh:** What it is doing in Dungloe in Donegal is in different parts of its business. It has looked at putting certain types of R&D and expertise in different areas around the world. It was not particularly because of an interaction with us. In fact, we are working with Randox at the moment, and are hopeful of some good news for us as well in terms of what is going on in Northern Ireland. Just a few years ago, we did a large project with Randox that created 350 jobs in its Antrim and Massereene sites. We are looking forward to other areas and have some work in progress with it at the moment.

**The Chairperson (Mr McGlone):** OK. You mentioned R&D earlier, as I was picking up through what you were saying. You said that Invest NI contributes — what was it — £50 million per annum to research services. Is that what you said?

**Ms McVeigh:** I do not think that we gave any numbers.

**The Chairperson (Mr McGlone):** Maybe I did not quite hear you.

**Ms McVeigh:** We do have the figures for how much we spend on R&D.

**Mr Sam Kinghan (Invest NI):** The universities' contribution would be £50 million.

**The Chairperson (Mr McGlone):** I thought that you said it was £50 million.

**Mr Kinghan:** That is the universities' investment.

**Ms McVeigh:** Yes. The £50 million is what is currently happening in the universities.

**The Chairperson (Mr McGlone):** Right. So that is without any contribution? Picking up on that, I think you said that R&D in the life sciences sector is vital for our economy. I am sure that you will expect my next question, as the Committee has dwelt on it a lot. We are almost a year into Horizon 2020. How are projects starting to emerge there? Officers have been appointed in the universities for that. You mentioned the pivotal role of the universities, and I am sure that some of us would hope to see a lot more progress because of that, and projects and applications being generated at, how should we put it, a more ambitious rate than they had been heretofore. How are things progressing on that front?

**Dr Samana Hussain-Brannigan (Invest NI):** From January 2014, we have had 14 life-sciences-related meetings to promote Horizon 2020. There were six applications altogether. Three were unsuccessful, two were successful at stage 1 and two were successful at stage 2. We have £50,000 that has been awarded at stage 1 for an SME access proposal. A couple of companies including Randox and Almac, have been invited to stage 2, and there is the potential for Northern Ireland to get £3.5 million in funding if they are successful. Those projects are at an early stage, as Horizon 2020 has just started. That is from January of this year. It is a long process to find out whether they are successful, but those projects have got to stage 2 at the moment.

**The Chairperson (Mr McGlone):** I want to ask about the all-island committee that helps you to work together — maybe some of you participate in it. I was down in Dublin last week and met the Minister with responsibility for innovation, who is very enthusiastic about it. They have a drawdown target of €1.25 billion. They are enthusiastic not only about that but about being helpful to us in the North. How is that Committee coming along and working?

**Mr Kinghan:** From our perspective, we were trying to encourage investment and collaboration, North and South. InterTradelreland is closely involved in getting collaborative projects, but we work with Enterprise Ireland and look at potential projects, including university interaction with companies here and company-to-company interaction. Maybe colleagues are involved, but I have not been involved.

**The Chairperson (Mr McGlone):** You are aware of it anyway.

**Mr Kinghan:** We are active, and we are encouraging universities and helping them where joint collaboration projects come through. In fact, we offer a number of grants in the planning definition stage and offer to assist the companies to put together a collaborative project. So, there will be a planning feasibility study, which will encourage the universities and companies to come together, and there could be participants throughout Europe.

**The Chairperson (Mr McGlone):** How are those coming along?

**Mr Kinghan:** We have a number of them. In life and health sciences, seven or eight have been done in the past year. Colleagues on the other side of the business are involved with Joanne Coyle. So, we have a number of them out at the minute, and, hopefully, those will lead into phase 1 and phase 2 applications. There are about seven or eight in the sector at the minute.

**Dr Hussain-Brannigan:** We are actively promoting our companies to apply for Horizon 2020. I think that Almac is looking for a specific person in its company who will focus on Horizon 2020. So, it is a big thing with our companies as well.

**Mr Kinghan:** The other thing is Innovate UK and TSB funding. That sector has been very active. We have been encouraging them to get funds there.

**The Chairperson (Mr McGlone):** It has not been particularly active here.

**Mr Kinghan:** Almac and Randox have been very active in that area.

**The Chairperson (Mr McGlone):** You would expect them to be active because they are high-tech companies.

**Mr Kinghan:** It is very R&D focused and requires a certain level of capability.

**The Chairperson (Mr McGlone):** I appreciate that, but when we talk to businesses, that is part of the problem. The companies you mentioned are high tech. They are good and they are capable, but they have the staff capacity to work up projects. It is the other people who might have an equally good project, which is where the support from Invest NI and the university should kick in. That is why the project officers were put into the universities. That is the issue that was coming back regularly to me.

**Mr Kinghan:** What we can offer there is feasibility support to get involved in existing consortiums. We would encourage and try to lead any consortium, and we would try to get them involved with the bigger companies and universities, initially as a partner, to work on Horizon 2020, and then build themselves up in capability from that. It is a stepping stone to get to the point where you can be heavily involved. With the feasibility study, we can support a company to get involved with larger companies, plan resources, and support that to get the application submitted in the first place. That is available to SMEs and consortiums. We have a number of those approved this year already.

**The Chairperson (Mr McGlone):** I am looking forward to seeing more. The figure we have for the sector you were talking about, private sector employment, is 1.5%, but you said that it was 2%, and represents 12.5% of total exports. It seems that growth in that sector could have a disproportionately beneficial impact on the local economy. In other words, investing in those sectors, if they are giving you that sort of return in terms of exports, seems pretty good.

**Ms McVeigh:** As you said, we have seen that the investment we have put into companies and universities to support the growth has grown the sector well. It has grown over the past three or four years, especially in the period of recession. So, the return on investment by us is very good.

**The Chairperson (Mr McGlone):** How would you evaluate the potential for growth?

**Ms McVeigh:** One of the things we hope to see coming out of the capability study is areas where we see potential for growth. We are hoping that the strategy from DETI will allow us to look at areas where there is going to be a return investment, where we should focus our R&D and our investment in growing companies, and how that aligns with global trends? So, we need to invest where there is going to be a potential future market. We know that things such as stratified medicine and connected health are global trends and are becoming more important. Health economics is another. We have to invest against those global trends. We hope that the strategy that will develop from the MATRIX foresight study will allow us to do that.

**The Chairperson (Mr McGlone):** We have talked a fair bit about export. What about foreign direct investment (FDI)?

**Ms McVeigh:** Life and health sciences is not one of our three priority sectors within FDI — they are ICT, financial services and business processing outsourcing. We have not been a major recipient although we have had FDI investments over the years. We have quite important companies here, like Bemis and Warner Chilcott; so we have companies here in the FDI space.

Looking forward to the strategy, we are looking at what areas we can work with that show promise based on our strengths and the opportunities for FDI. We asked the MATRIX study to benchmark us against places like the San Diego cluster, Scotland, Wales and the Republic of Ireland to see what we can learn from the way they positioned themselves in the FDI market and bring on board as part of our strategy.

**Mr Kinghan:** As part of BIO last year, we got some traction on R&D. There have been FDI negotiations, with a couple of potential investments worth £6 million in cancer research from California. The Minister met them last year but I cannot say much more than that at this stage because we are still in negotiations with those companies. We are getting some traction now with universities being the asset that attracts in research-based R&D. Those companies will lead to potential growth.

**Ms McVeigh:** The other interesting aspect of FDI is not employment but in health in bringing clinical trials into Northern Ireland. There is inward investment by companies doing clinical trials here and linking into the universities and academia. Clinicians here can also bring — *[Interruption.]* That happens where we have strengths in particular areas of medicine or clinical work.

**The Chairperson (Mr McGlone):** Is there an economic downside associated with the three key areas, where there are infrastructure or skills deficits? You have been anticipating this; it has been evaluated a long time ago. What is your evaluation of those?

**Ms McVeigh:** The deficit areas?

**The Chairperson (Mr McGlone):** Any deficit areas or weaknesses.

**Ms McVeigh:** Within life and health sciences?

**The Chairperson (Mr McGlone):** Yes.

**Ms McVeigh:** Particularly skills?

**The Chairperson (Mr McGlone):** Skills or infrastructure.

**Ms McVeigh:** I keep referring to the future with this capability and MATRIX study. The strategy for life and health sciences that will emerge from that study will come before the Committee in about six months. One thing that the study is looking at is that if we are going to have an aspiration to achieve whatever the strategy is, what are the areas of deficit? Skills in particular will be one of those areas.

We know from our companies today where skills are an issue. We are working closely with DEL and Colleges NI to encourage courses and training in those areas to ensure that companies can access skills here. We will also look at areas of infrastructure, such as funding and seed funding. We will also look at property and other infrastructure for clinicians to undertake clinical trials. All those things will be part of the capability study to ask, "What does good look like? What do we not have and what should we be doing to put that in place?"

**The Chairperson (Mr McGlone):** Your document highlights infrastructure deficiencies in key areas, such as the experimental medicine hospital and oncology infrastructure.

**Ms McVeigh:** If you ask clinicians what good looks like, they can tell you what will work and what we could have here. Those would then be areas that we could talk about.

**Mr Kinghan:** From point of view of skills, we have already tried to lever out some of those deficiencies. For example, we now have the first UK degree in stratified medicine. That was based on an £11.5 million investment put into the University of Ulster. That is bio-informatics, which is among the skills you mentioned. There is also the biology side, so it is a dual degree in mathematics and biology. We have tried to move towards anticipating some of those needs, and bio-informatics is key to the future.

There is also the area of analytical chemistry. We have been working with local companies like Almac, which are in joint projects with universities to set up courses tailored to meet their needs. A couple of other R&D projects are under appraisal that will do the same on an even bigger scale. I cannot speak about those because they are still under negotiation.

**Dr Hussain-Brannigan:** The stratified medicine degree has taken its first intake already. They have 22 undergraduates and, I think, quite a few PhD students as well. We will have the bio-informaticians coming forward eventually, which we will need for stratified medicine.

I think you mentioned the experimental medicine hospital. What we are getting from our clinicians and researchers is that we have quite a lot in place already. We have very good stratified medicine research, but we do not have a dedicated experimental medicine hospital through which they can take their research from the laboratory to the patients. It would benefit patient health and have economic benefits in getting clinical trials to Northern Ireland.

**The Chairperson (Mr McGlone):** In order to have the experimental medicine hospital you do not need a new hospital; you need services in some of the existing good facilities. I am thinking of the City hospital; it immediately springs to mind.

**Dr Hussain-Brannigan:** It is something to be looked at, when we are doing our investment. That would be the best time to do that.

**Mr Kinghan:** It brings together the research that is happening disparately. The imaging equipment, the research nurses, the clinical nurses, the clinical doctors and clinicians would all be together in the same facility. It is bringing them together in a focused area, where they are all working. You would then have a series of floors donated to industry. You could spin in some companies from the US, plus spin-outs from university, which can happen as well. It brings a focal point, and this model has worked well in the major centres in the United States. In one of the Dublin hospitals, they are building a centre bringing together what they are calling "smart ageing". So, they are bringing together all the diseases relating to age — all chronic diseases. Again, there are two floors for industry — for spin-outs and spin-ins. So, they are investing in the same sort of model. And that is where Atlantic Philanthropies is putting money into; Chuck Feeney is putting money into that. A big investment is going in there. The smart ageing drive is part of the economic strategy there at the minute.

When it comes down to it, our area of expertise is cancer. What we can do is take ourselves up to the top of the league in cancer. It brings the focus together. It brings the experimental hospital, the clinical trials, the imaging equipment and industry spin-outs together in one focal point.

**Mr Anderson:** Thank you for your presentation. I will look at the establishment of the health innovation and life sciences hub. I see that, in one of the key recommendations in the task and finish group, you talk about the focal point and the nerve centre. Do you have any idea about when that might be established?

**Ms McVeigh:** A lot is coming out of the capability report that is going on at the moment. I know that the commitment is there to have recommendations about that within the next period of time. Its structure and format, and what it looks like, are still to be defined. The recommendation is that there needs to be a joining up of the various partners in coming together and having a greater degree of focus to implement any strategy coming out of the MATRIX and foresight study, and then the strategy study that will probably be in the spring of next year. I imagine it would coincide with that.



**Mr Anderson:** So, the earliest would be next spring?

**Ms McVeigh:** Well, the health innovation and life sciences (HILS) hub would be established, or would be defined, by next spring. I think we will be closer to definition. If you think about it, we need to know what our strategy is in order to create the actual centre. My reading of the timeline is that the MATRIX foresight's capability study will be towards November/December this year, and then DETI will be looking at the strategy next spring — a January-to-March time frame. I would say that the HILS hub would be an outcome of that.

**Mr Anderson:** What do you see as the expected benefits of this whole hub.

**Ms McVeigh:** The hub will do what we were talking about; that joined-up approach between academia, government, health and industry. It was a question I was asked yesterday, when somebody said to me that you can think of it as a wheel, and the hub is in the middle. It allows for the sharing of information. It allows the synergies between partners, whether they be from academia, industry or are in government policy. It also allows for influence and presents a focus and a joined-up approach, which takes all the very disparate groups and actually aligns the strategies and some of the actions they can take. It is not that people will not be doing their own thing, and it is not that it will not be a case of command and control, it will be that it allows people to come together. It facilitates that and actually encourages it to happen.

It will take forward the strategy for the implementation of the life and health sciences together in a one-stop shop, which we do not have at the moment, because we have different groups and places.

**Mr Anderson:** Where do you see that one-stop shop being located?

**Ms McVeigh:** I think that that will come out of the definition as to whether it is physical, co-located or standing separately. There are different ideas on that and I would say that the strategy will dictate the recommendation on what that should look like.

**Mr Anderson:** So, that has not really finalised?

**Ms McVeigh:** It is not totally finalised or defined. There are different opinions as to whether it needs to be stand alone, whether it can be co-invested or co-located, whether it can be a subset, all of those things, because a lot of it is about tying silken threads around very many different groups there already —

**Mr Anderson:** Do you see that functioning in one situation with those threads being connected to it in some way, or is it loosely connected?

**Ms McVeigh:** Again, that will be an interesting definition. I think that the feeling is that it will not be command as in authoritative, but it will be more influencing, facilitating and creating. However, it will have authority to bring together different groups and help drive forward collaboration. That is basically where the thinking is. It will be very difficult to define how best to implement it until we see the strategy, which will probably be in the spring of next year.

**Mr Anderson:** What about the employment situation at the hub?

**Ms McVeigh:** Form will follow function; so we will need to define its function, the sorts of things that we will do and what it will take to drive that forward. People will look at what sort of level it will need to have, whether it will require a director or CEO, somebody who will be the focus and be able to talk to industry, academia, the health sector and the Government on the economy side and also on the health side. There will be policy, but there will also be somebody who can talk to the delivery side, to the clinicians, somebody who can engage with industry. There will also be a support network with that. The range of support to go with that would be decided depending on the functions that they are given.

**Mr Anderson:** So, there are quite a few players here. What do you see on the employment side? Do you see that maybe growing or expanding as it settles down?

**Ms McVeigh:** That is a good question in that, again, without knowing what the actual model is going to be, I cannot really guess at how it would grow. A lot of what is happening is already happening in different places. They do not need to replicate the wheel in different places; they need to make sure that all the wheels are working together smoothly. I would not see it necessarily being something that would replicate things that are already happening elsewhere. This is really about making things work more smoothly. That is probably not the best way to describe it: rather, it is to ensure that the synergies there are unlocked, because sometimes people do not know what other people are doing, and working together will unlock something.

**Mr Anderson:** It is to bring it all together.

**Ms McVeigh:** Yes, it is joining the dots across government, industry, academia and health delivery.

**Mr Anderson:** The issue is to see how it will function going forward. It will benefit, and all these bits will be pulled together to ensure that the functionality will be there.

**Ms McVeigh:** You are absolutely right. To work well, this has to have buy-in from all the players who can drive forward health and wealth in Northern Ireland.

**Mr Anderson:** There were quite a lot of questions in there, but it was good to hear Almac being mentioned quite regularly this morning, being from that constituency myself.

**Ms McVeigh:** It is an impressive company that we enjoy supporting.

**The Chairperson (Mr McGlone):** I was wondering whether you were lining it up for something else there *[Laughter.]*

**Mr Anderson:** Not at the moment.

**Ms McVeigh:** We have not even got to location yet.

**Mr Frew:** Leading on from that, you talk about a knowledge deficit throughout all the sectors here that should be joined up: government, academia, the health sector and industry. What does that look like to you, and how big an impact has it had up to this point? If there is an information deficit — this a reverse question — what does it look like?

**Ms McVeigh:** What is it that we do not know and, if we did know it, what would we do with it? That is a hard question: I do not know what I do not know.

I will talk about what we have seen. Where industry and academia come together, there are tremendously powerful outcomes that can and do impact on health. That is the model that we are being encouraged to follow, and not only by Innovate UK. For everywhere that we benchmark ourselves against, we see that the better the flow of information between parties, the better that allows developments to take place. Where we see R&D investment in the universities linked to companies — we fund that more generously to encourage that approach — the joining of industry and academia is very good. If you add to that clinicians, you have got the package.

**Mr Kinghan:** In translational research, you can take it from the lab right through to the patient, which is where you are going to get the economic and health benefits.

I will give you a practical example of an information deficit in some of the work that we did recently that needs to be driven forward by the HILS hub. In September, we had a joint event at Queen's with the Health Department, industry and the Association of the British Pharmaceutical Industry (ABPI). That was to attract more clinical research to Northern Ireland. At the minute, we attract multimillion-pound clinical research, but we are not sure how much it is or where it is; it is not coordinated. That is the first point: get the information right. Then, what can we do to maximise that? Invest NI can be involved. Without giving away any confidences, I can tell you that, in December, there is a major visit on clinical research, and I am involved in talking to that company to try to attract pre-clinical research, lab work, manufacturing, sales and marketing. We can spin out from that. If the Health Department, through its work, attracts clinical research, and if we know that that is happening, we can spin out from that and attract all sorts of other investment around it. It is about formalising that. It is not just the fact that we push that forward and have an event and something comes from it. We need to coordinate

and share that information on an ongoing basis to maximise the benefit from each other. We can use those opportunities to sell our bids. Health and wealth can be balanced up and sold together very neatly. That information deficit is there at the minute. Northern Ireland is capable of doing that, because we are small and we know each other. It is about being able to get formal procedures in place and enforced so that we share that information on a formal basis.

**Mr Frew:** You talk about priority health sub-sectors. Everything in life has to be targeted and focused. You mentioned cancer, but what are the priority health sub-sectors that we need to be directing towards? Obviously, we cannot do everything. There is a wide spectrum here with all these players; academia, industry and government. Surely we need to target it. What does priority health sub-sector mean?

**Ms McVeigh:** There are things that we know we are good at. The capability study aligns those so that we can benchmark ourselves against the world. It is a question of being good, and then asking, "How good are you?". We are looking for that information from the capability study. The overlay on that is to ask what the world needs. For example, smart ageing. Ageing is going to drive a lot of decisions in health in the future. What can we do in that sub-sector? We see global trends like ageing, data analytics, health, stratified medicine or personalised medicine. If we match our capability to those, that will give us the focus that we need. The capability part and the identification of the trends is done. We just have to do the strategy now, in the next two or three months.

**Mr Frew:** Government strategy is always high-level. There is always a paper, which sometimes sits on the shelf. In a practical sense, say a businessman comes to me. He is from eastern Europe but based in London. He has a decision to make to advance his business. He could create 20 to 30 jobs overnight. He has a choice: will he come to Northern Ireland or will he go to Cyprus? How does the strategy and how do you people tie in with that businessman to get him?

**Mr Kinghan:** From the point of view of the strategy first, it is about having the capability well mapped, and it will not be done at a high level. It is right down to the centres. There is a 154-page document that goes right down to define the centres and what their expertise is. So, it will have the sectors that we are going to go into, but it will then have the centres of excellence that can feed into that. From a capability point of view, we can quickly match his need to that and say, "Here is what we have got in your sector".

**Mr Frew:** If this was pure industry where he was making drips or equipment for hospitals, it may well be a basic manufacturing plant, but, still, it is entangled with health. Surely, when we talk about the industry, that is what we are talking about.

**Ms McVeigh:** In that case, if he has a project with 20 to 30 jobs, we would ask what it is in. Exactly as Sam said, we would look and say, "What is it you need? Is it a facility? Is it people?". We would put together a proposal for him that would say, "Here is what we can do for you in Northern Ireland. Here is why it will work in Northern Ireland better than in Cyprus or somewhere else, because this is what we will be able to offer to you". That offer is not just about the Invest NI tangible, monetary support; it is also about things like whether we can help you to identify the right location and the right support for growing your workforce and whether we can help to train your workforce. So, we would put together all the various assistance and mechanisms that we have to help. Sam is absolutely right that the critical point of that is understanding what it is that he wants to achieve. If it is a manufacturing facility and he needs suppliers, a space and people, we would work with him to get that in. So, that is what we would do.

**Mr Frew:** Who would I need to speak to if that scenario were true?

**Ms McVeigh:** If that is not a theoretical question, there are two easy routes to here. If they are physically in London, Invest NI has a London office, and any number of people in the London office would be able to do that. If you would like to give me their contact details, any one of us could reach out to them and ask them whether they would like to come and meet us if they are physically in London. If they wanted to visit here, our normal procedure is that we talk to them and encourage them to visit. When they come, we explain how it would work and what we do. We would introduce them to other companies so that they could see how it is done. We try to put flesh on the story, as it were, and that would be easily done. If there is a real person there, we would be happy to talk to them.

**Mr Agnew:** Thank you for the presentation so far. Coming back to the strategy, you have outlined the capability study, and you are looking at what we can do and what the strengths and weaknesses are etc. Moving on from that, what do you expect the strategy to cover?

**Ms McVeigh:** There are two levels to it. Mr Frew said that sometimes such papers can sit on a shelf. DETI and the Department of Health will look at the top-level strategy: what should we as Northern Ireland be looking to achieve in terms of both health and wealth? It is back to what we can do to increase the commercial benefit here to the economy and also how we can impact on the patients and the clinical work that we do here in Northern Ireland. So, at the top level, that is what it would be. What we then see happening is Invest NI taking that strategic direction pointing into the future and saying that these are the things that you could do. We will then put the "how" to that. How are we going to do that? How will we invest in local companies? What areas of R&D should we be looking at? Where do we need to encourage our universities, both on research and collaboration and also on the skills and bringing in the skills? The infrastructure, property and funding will be another one and markets is another. So, for example, if part of it is that we need our companies to export more, where is that to? What are the markets? What do they need to be there? What is the support that they need to get into them? Funding is another one. Are there seed funders? Are there venture capitalists (VCs)? Are there funds here that can work with the life sciences sector? That sector is very different from the IT sector and very different from the guy who has done an app in his bedroom. These are long, difficult projects that are very regulatory-focused. Do we have venture capitalists and seed funders willing to take that on board? We will look not only at the how but, going back to the question about the gaps, at what we need to do to generate and make a difference in putting that strategy together.

**Mr Agnew:** Should we anticipate a clear action plan outlining the hows, the whys, the whos and the whens?

**Ms McVeigh:** Absolutely. Exactly.

**Mr Kinghan:** The targets.

**Ms McVeigh:** The top level will be DETI and Health telling us, "This is where we want to go, and where we think you should go, and this is why", and then Invest will do the action plan that will get us there, by asking, "What do we need to do?". It will not just be our actions; again, it will be very much linked to the universities and our industry, and it will involve our sector players very closely as well.

**Mr Agnew:** Given the various interests, particularly, from our point of view, the Department's interests and those of the Department of Health etc, who will do the monitoring process? What is the line of accountability?

**Ms McVeigh:** Do you mean for the action plan?

**Mr Agnew:** Yes.

**Ms McVeigh:** Do you mean for the actions taken or the development of the plans?

**Mr Agnew:** I mean for the actions taken and monitoring whether or not the objectives are being achieved and achieved on time etc.

**Ms McVeigh:** The overall vision will be set for us, and, presumably, there will be targets around that. We always get targets.

**Mr Agnew:** We like targets because we can then check if you have met them. You always tell us that you have, and so it is great.

**Ms McVeigh:** The targets will be set; we will ask how we will get there; and then they will be built into Invest NI's corporate planning process. We all get targets, right down to our individual level, as to how many of these we will do. So, that could be an R&D investment target, an assistance target, an FDI target or an infrastructural target, which might be, "How do we look at funding?". Those targets will be built into our individual work.

**Mr Agnew:** Is the application of the stick a corporate collective responsibility or will there be a departmental lead?

**Ms McVeigh:** There will absolutely be. We will then link into DETI, because our targets are monitored absolutely by DETI. There will be things in that that we can influence but do not control. For example, for university courses, we can certainly talk about that, but we do not have the stick to do that. This will not be just DETI and Health, because DEL will have to be involved, as will all the other areas.

**Mr Kinghan:** The HILS hub might have a role in monitoring.

**Ms McVeigh:** Absolutely. As the HILS hub comes into being, targets will be set against it, and milestones and achievements will be monitored. That will be part of it as well. Those will be set out not only at a top level but through Invest NI corporate planning and right down to us having individual targets that we have to adhere to.

**Mr Agnew:** You mentioned DEL and spoke earlier about skills requirements. We get lobbied by various company organisations etc, around skills and tax, and corporation tax is obviously the big issue. I certainly do not recall hearing from the companies mentioned in this sector or them presenting to us on those issues, but the general call from companies is, "Please could you cut our corporate taxes and invest more in skills". So, "We want to pay less, but we want more in return, thank you very much".

**Ms McVeigh:** Such is life.

**Mr Agnew:** It sounds perfect. To paraphrase, what has been going back to them to say, "Ask not what your country can do for you; ask what you can do for your country"? These are indigenous businesses; what work are they doing to give back? They obviously create employment, but that is it.

**Ms McVeigh:** Each of us could talk about examples of that, but, at a top level, all the companies realise that and work closely with the universities. Within the stratified medicine —

**Mr Kinghan:** And the Almac project.

**Dr Hussain-Brannigan:** One of the projects that we funded last year was Almac. It started last year. It has moved 17 of its staff into a university setting where they are informing research, and that has had a really big impact on the way the university thinks and has got it very commercially focused. They are focusing their research and applying for funding that they would not have thought of before. That is paying back. They are giving back to the university their commercial strength and, obviously, learning from that for themselves. It is a research pipeline for them as well. That is only one example. Another one is that they have developed a cancer drug to a certain stage and are now undertaking a clinical trial, based in Belfast. Again, that has improved the reputation of Belfast, in the pharmaceutical setting. The other thing is that our companies are also going out. Almac recently made a major oncology deal, worth about £9 million. At the association of oncology meeting in the US, it was the most talked about research. Companies are hearing about our reputation, and people want to come to Northern Ireland to invest. They are putting back, in those terms.

**Mr Agnew:** In the example you used, Almac staff were going into the university. How does that arrangement work? Does Almac continue to pay those staff? What is the university's input? What are the practicalities of that?

**Dr Hussain-Brannigan:** It is a joint project. Almac pays, and we fund the project jointly. There is funding coming from both sides: Almac is funding a part of its staff, and we are funding Queen's as well. So those staff are funded through the project. Key is the fact that they have actually left Almac and gone into the university and informed the research. The university lacked medicinal chemistry skills, and a lot of these chemists are medicinal chemists. Now they are in Queen's and are building up the strengths of that type of skill. So, it is working well. It is paid for both through Almac and Queen's.

**Mr Kinghan:** It infiltrates into the universities in terms of professorships, courses and PhDs, and people wanting to do the undergraduate course. So, it has more impact than just the staff being seconded, because they bring in the expertise and it spreads throughout the university. It attracts more good people into those areas. That investment influences skills. There are examples of that

with other companies as well. There is a major project, which we cannot divulge, that takes that to a different scale. It is with another company in Northern Ireland. We cannot divulge what that is, but that will be a major centre of excellence linked to the university.

**Dr Hussain-Brannigan:** The other thing is that, when you are teaching in a university, it gives your teaching an industry focus. Industry has always complained that university students come out and have no idea of what is required of them in industry. So, this builds that in as well.

**Mr Agnew:** That is important. Our job is to educate people and give them the building blocks. It is the company's job to do the finishing.

**Mr Kinghan:** The companies are giving something back, in a way, there. It is to their benefit, but they are working closely with the university, transferring a lot of those skills over and then the university teaches those skills better. And when it comes to undergraduate courses, it can teach those too.

**Ms McVeigh:** Even more generally than just in the skills area, all our companies are getting involved in the capability study, and they are actively involved in helping to develop the strategy as well. So, hopefully, this is not only a joined-up approach post that; it is a joined-up approach at getting there. They have contributed very well to that.

**The Chairperson (Mr McGlone):** I have one final issue, which is from the report on the visit that a delegation from the Committee made with Invest NI. The report states:

*"The issue was raised that there is no formal mechanism to record clinical trials in Northern Ireland. There seems to be some tension between the clinicians and the pharmaceutical industry. Collating clinical trials information could help sell Northern Ireland as a place to do business in this sector. There is a need to ascertain the number of clinical trials going on in Northern Ireland, who is involved."*

Have you encountered that issue?

**Ms McVeigh:** Yes, Sam talked about that.

**Mr Kinghan:** I talked about the event that we organised in September, where ABPI, us, the universities and Health got together to try to attract in more research. We had 100 delegates, and 19 major pharmaceutical companies attended. From that, there are a number of actions. One of them is that we are working with our Health colleagues to co-sponsor a potential clinical liaison officer. That person would come from the industry, and their objective would be to attract in more trials, coordinate it and record it. There is a problem with the different trusts recording it in different ways. We need to bring it all together and understand what is actually happening at the minute to maximise it. So, we are working with the Health Department and Health and Social Care (HSC) to try to co-sponsor a post. It is similar to how HSC Innovations has worked in the past for intellectual property (IP).

**The Chairperson (Mr McGlone):** That person would do this.

**Mr Kinghan:** The role would be to map out what we have, to understand the quantity and quality of what we have, and then to take it forward with industry and develop a plan to attract more investment. We are not quite sure of the figures, but there must be multimillions coming into Northern Ireland. For example, David McEaney in Craigavon is doing research in cardiology that is industry-funded. About £1.5 million has come into that one centre in Craigavon. There must be major clinical research investment of a similar fashion coming into Northern Ireland. None of us really knows how much is there. We need to establish that first, and then maximise what we have and bring it together. So, that is what that is about. It is another form of investment, but it has major health benefits as well, because once the clinical trials come in, people get access to the most innovative drugs and the highest-quality care procedures. In these clinical trials, the procedures must be of the highest quality. Even people on placebos in those trials will have improved health — they are not even taking the drugs, but they are getting high-quality care. So, it is not just health; it is health and wealth together.

**The Chairperson (Mr McGlone):** So it is in hand.

**Mr Kinghan:** It is in hand.

**The Chairperson (Mr McGlone):** OK. Thanks very much for that. That concludes our session with you today. Thanks for coming along and thanks to your colleagues who helped, supported and facilitated the visit to the United States. Thank you.

**Mr Kinghan:** We have signed up for BIO next year as well, and we will be in Philadelphia with Almac, at its headquarters. It is taking a good portion of our stand next year.

**The Chairperson (Mr McGlone):** There you are, Sydney. You may get out to that one.

**Ms McVeigh:** Thank you very much.

**The Chairperson (Mr McGlone):** Thank you.