



Northern Ireland
Assembly

Committee for Enterprise, Trade and Investment

OFFICIAL REPORT (Hansard)

**Inquiry into Developing the Northern Ireland Economy
through Innovation, Research and Development: DETI**

22 March 2012

NORTHERN IRELAND ASSEMBLY

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Inquiry into Developing the Northern Ireland Economy through Innovation, Research and Development: DETI

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Members present for all or part of the proceedings:

Mr Alban Maginness (Chairperson)

Mr Daithí McKay (Deputy Chairperson)

Mr Gordon Dunne

Mr Paul Frew

Ms Jennifer McCann

Mrs Sandra Overend

Witnesses:

Mr Graeme Hutchinson

Department of Enterprise, Trade and Investment

Mr Ciaran McGarrity

Department of Enterprise, Trade and Investment

Mr Bernard McKeown

Department of Enterprise, Trade and Investment

The Chairperson: I welcome Mr Graeme Hutchinson, head of the Department's economic policy division; Mr Ciaran McGarrity, the principal officer in the innovation policy unit; and Mr Bernard McKeown, the principal officer of the foresight and horizon scanning unit. You can explain to me what that means later on.

Thank you very much for coming along. We are disappointed that we did not get your written documentation in a timely fashion; we received it only yesterday. A number of Committee members have commented on the lateness of the document. I emphasise again to the Department the need for the timely production of documentation. It is simply not acceptable. This matter was raised at the Chairpersons' Liaison Group, and there is a general discontent and a feeling among Chairpersons, who reflect the views of the Committees, that this is not acceptable. I would like you to convey that to the Department.

Nonetheless, we have received the document, so I invite you to make an opening statement, after which we will ask questions.

Mr Graeme Hutchinson (Department of Enterprise, Trade and Investment): We are delighted to be here to participate in what we consider a very important inquiry for the Department and, indeed, for the economy as a whole. I apologise for the lateness of the evidence to the Committee. I will go through some of the material that we cover in our written evidence, if that would be helpful.

The Chairperson: Thank you very much, Mr Hutchinson.

Mr Hutchinson: We welcome the inquiry for two reasons. First, innovation and R&D, as it is in the economic strategy, is our top priority to drive growth at the regional level. Any material that helps to progress our activities in innovation and R&D can only help. Secondly, we welcome the timing of the inquiry. The economic strategy highlights the fact that we are involved in producing an innovation strategy in 2012 as the successor to the regional innovation action plan, which the Committee considered last year and, indeed, broadly endorsed.

As part of my opening remarks, I will briefly focus on the content of the inquiry on innovation and R&D and what the Department has been doing to date on prioritising action on that, and then I will give you a flavour of the innovation strategy work that we are undertaking in 2012.

The publication of the economic strategy last week was an important milestone for the Executive. It marked the end of the work that began with the independent review of economic policy that Minister Foster launched, and which was reported on in September 2009. Given the heavy emphasis that the Barnett review placed on innovation and R&D, it is worth pausing to say that the Department has learned lessons from the Barnett review recommendations, such as the need to prioritise exports and value-added foreign direct investment (FDI) at the regional level.

One of the key recommendations in the Barnett review was that R&D and innovation should be considered the most important long-term driver of regional economic growth. That is why it is cited as our top driver in the economic strategy. The emphasis on flexibility with Invest NI was a key issue in the Barnett review, and we have raised delegated limits so that Invest now has more autonomy to operate in innovation and R&D. The delegated limits for innovation and R&D were £2 million and are now £6 million. That gives Invest NI more flexibility and freedom to operate and to support innovation and R&D.

The two priorities of the framework for growth, which Minister Foster launched in January last year, are rebalancing the economy over the longer term and rebuilding it in the short to medium term, given the impact of the recession on the labour market. That was very much informed by the independent review of economic policy (IREP). Under rebalancing, we have five priorities, and the first, intentionally, is to stimulate innovation, R&D and creativity. It is top of the stack, and, for a regional economy, it is imperative that that is recognised as the top driver for growth. Obviously, that must be supported by the other priorities, not least improving the relevance and use of skills to support that R&D agenda.

In the framework document that was launched last year, we highlighted the fact that, over the previous Programme for Government period, spend on economic development had far outstripped overall growth, certainly in respect of current expenditure. Between 2007 and 2010, spending on economic development increased by 30%, compared with an increase in overall expenditure by the Executive of just shy of 13%. One of the key points in that document was that the biggest increase in the priorities was in stimulating innovation, R&D and creativity. Over that 2007 to 2010 period, that increased by 80%, so, as we move to populate an innovation strategy, we are not starting from scratch. Over the previous Programme for Government period, there was significant growth in spend on innovation and R&D, but we live in a competitive world, and other UK regions and global competitors are equally carrying out the same prioritisation and investment.

That framework was then embedded into the economic strategy. As members will know, it is included in section 4 of the strategy, which was launched last week. The strategy includes an evidence pack, which was launched on the strategy's website. I trust that it articulated our recent success in innovation and R&D, including the largest increase in total R&D spend since 2008, a 40% increase between 2008 and 2009, and a further 8% between 2009 and 2010. That reflects some of the progress that has been made in that area, but we recognise that much more needs to be done. The UK in itself may not be a good comparator. As our evidence pack highlights, its spend relative to the overall economy's output is much less, compared with other countries such as Sweden, Finland and Israel.

On the matter of firms that are engaged in innovation, we have one or two that the statistics classify as "innovative active", but it is only one or two. Our UK competitors and more global competitors have much in excess of that.

On the strategy's priorities for innovation and R&D, the Department has led on the MATRIX work, from which we have identified the priority areas of telecoms and ICT; life and health sciences; agrifood; advanced materials; and advanced engineering. Those are our priority sectors. That is not to exclude other sectors, but those are identified by business as the areas that are really lifting the big burdens in exports and R&D. Companies that are active in those areas account for over three quarters of the spend on R&D already in Northern Ireland, so clearly there is a lot that we can do to accelerate and make progress in those areas. That makes the obvious and important point that R&D and innovation is not an end in itself, but is about encouraging companies to export. For them to go into the global markets, they must be more innovative and R&D intensive.

The Committee will have gone through the strategy in detail. The key highlights in the area of innovation and R&D include supporting £300 million of investment in R&D, with at least 20% — a fifth — coming from small and medium-sized enterprises (SMEs). Another is for 500 businesses to undertake R&D for the first time. Having gone through your evidence about the importance of cradle-to-grave support for companies engaging in R&D, we are very much seized of that. Obviously, it is not only a DETI strategy but an Executive strategy, so it includes actions on agrifood, the creative industries and other areas, all to support the overarching objective of the strategy to promote 25,000 jobs and to increase manufacturing exports by 20%. It is also worth remembering that the Department is involved with DFP and OFMDFM in rebalancing the economy with the UK and the Treasury. We believe that corporation tax will have a material impact on innovation and R&D, stimulating growth in the business base with value-added businesses coming in and strengthening supply chains with local companies.

The economic strategy identifies the sectors that we might be able to increase more significantly with access to that policy lever. Those areas include technical and R&D centres, fund management, private equity within financial services and within life and health sciences. You have already received evidence from Almac and others in the bioscience and pharma sectors, but we think we can scale and grow those areas, with access to a lever that attracts companies not for cost, but for profit. Going forward, R&D and innovation is about improving the profitability of companies.

As I said, we also welcome the Committee's inquiry on the grounds of its timing. This year, I have lead responsibility for producing the innovation strategy that is signalled in the economic strategy. We have recruited Mike Kitson from the University of Cambridge. He was very helpful in building our evidence base for the economic strategy. We have brought him in to help frame the key priorities as far as the innovation strategy is concerned. I will be very happy to come back to the Committee when that strategy is in sharper focus. However, some of the key areas that we are looking at include the need for greater collaboration. You will have heard before in evidence from the universities about the Triple Helix — the linkage between business, academia and government — and how best that can be done. We already have programmes in that area in respect of innovation vouchers and knowledge transfer partnerships, but the economic and innovation strategies have highlighted the need to explore with the science park how it can evolve into a more open innovation centre. I know that you have heard evidence from the science park, but that is a key priority, we believe, in strengthening the collaboration between those actors in innovation and R&D.

Access to finance will be a critical issue. That is not to say that we should divorce it from Invest NI's wider access to capital strategy. It has interventions, and I am happy to speak at more length on that later in respect of debt finance and equity finance. It is about giving help to companies that are finding it difficult to access finance. That will more likely be the case in innovation and R&D than in other support packages. Therefore, Invest NI's access to capital is over £100 million, which is levered through public and private sources. It is about matching that with what we will do under innovation and R&D.

In respect of the concept of internationalisation of R&D and innovation, it is about reaching out to our global competitors to work in partnership with them. Framework programme 7 has been a very big issue for the Committee, and we are seized of that. Ciaran is leading on the review of the support

structures that we have had to support and maximise drawdown on the framework. We will be able to speak at length on the more specific things that we have already actioned about having people to co-ordinate and bring together the key players to maximise drawdown. Therefore, that will be a key priority.

With regard to prioritisation, as you will know, with the emphasis on smart specialisation, Horizon 2020 states that there are certain areas that will be able to secure support. That is how we have sought to maximise that alignment between our priority sectors in the economic and innovation strategies with what we will have, going forward, in maximising drawdown.

My final point is about leadership. We welcome the Committee's emphasis on that area, because it is a key top driver of growth. The economic strategy suggests and highlights the potential of having an innovation council that would be not only Government led, but harnessed at a high level with universities and businesses to drive forward growth.

We have carried out an extensive review of best practice globally, including Finland, Singapore, and down to areas such as Estonia and the ROI. They have all been prioritising at that high level the tripartite arrangements between business, academia and government. We will see that and have some actions as part of that in our innovation strategy. Needless to say, we will have targets as part of that innovation strategy, and we will seek to balance the ambitious nature of those against a degree of realism as to where we are coming from in trying to grow the knowledge-based economy in Northern Ireland.

Chair, that is probably enough from me in respect of my opening remarks. I have given you a flavour of our submission, and I reiterate our apologies for the lateness of the submission to the inquiry.

The Chairperson: Thank you very much, Mr Hutchinson. I think one of the most interesting comments during the previous session with the Agri-Food and Biosciences Institute (AFBI) was made by Professor Davis, who said that there was a lack of critical mass in R&D in Northern Ireland. He felt that some of the barriers to increasing R&D were structural or cultural. I am not sure whether he is right, but I suspect he is. How do you view it? There seems to be a problem in that, outside of a few major companies, we cannot get a spread of R&D across a wider range of companies in different sectors.

Mr Hutchinson: I think that there is a systemic problem within the business base. We talk about a small or medium-sized enterprise based economy, but it is more micro-based, with companies that employ fewer than 10 people. To them, innovation and R&D must be considered a cost; they do not really recognise that, although it might initially be a cost, it brings long-term benefits. We have referenced some points in section 2 of the economic strategy on those long-standing structural issues; not just about the preponderance of small-company economy, but the lack of large companies. That goes back to my earlier point about corporation tax. What policy lever could we access that would attract large companies to locate here, not for cost reasons, but to access the skills base? We believe that corporation tax needs to be seen in the context of your inquiry on innovation and R&D. It is about large companies setting up and the evidence that we have from ROI about the spillover effect of knowledge.

The Chairperson: If I could usefully stop you there, you are going back really to the Barnett review, which is the basic approach to plugging that productivity gap, giving Invest Northern Ireland more flexibility, putting emphasis on exports in respect of industry and business, and attracting high-value jobs. I think what you are really saying — I do not want to put words into your mouth — is that the microbusiness base of much of our private sector is really not a sufficient basis for developing R&D to the level that we should have.

Mr Hutchinson: There are actions in the Programme for Government and the economic strategy about having 20% of R&D coming from SMEs, but to reach our overarching goal of converging with living standards in other competitive countries on the basis solely of investing in micro-based companies in R&D, we do not think that would be sufficient.

The Chairperson: That is unrealistic.

Mr Hutchinson: It is. It is necessary to continue to invest in those companies and to skill them so that they see and are seized of the need and opportunities in innovation and R&D, but it is not sufficient, certainly not in the context of converging with living standards elsewhere.

Mr Ciaran McGarrity (Department of Enterprise, Trade and Investment): The key challenge in dealing with microbusinesses, as Graeme was outlining, is to get more companies to be innovative. R&D is a subset of innovation. Innovation drives productivity; the evidence is clear from the UK and other parts of the world. The National Endowment for Science, Technology and the Arts (NESTA) estimates that 18% of innovation activity is R&D. R&D is not for everybody, although it is a key driver of exports. If we can get more microbusinesses to be innovative through skills, leadership and management, that is one way to make progress. We must look at the broader concept of innovation. Then, when companies, through MATRIX and other vehicles, see where opportunities are in the future, we can encourage innovative companies to move into those sectors and markets. Through initiatives such as Invest NI and other delivery bodies, we can encourage greater collaboration between the knowledge base in academia, and those companies. However, companies need to be innovative. Graeme has already outlined our level of innovative capacity. We need to move up that scale. That is one of the targets that we have set.

The Chairperson: I do not want to be pedantic about it, but there is a difference between innovation and research and development.

Mr McGarrity: Absolutely. Innovation is about change. It is about adding value from a new product, process or system. R&D can be used to deliver that. So, too, can skills, design and creativity.

Mr Hutchinson: It is worth emphasising, Chair, that our support packages through Invest NI differ depending on what the company needs. Therefore, R&D will receive different types of support, such as early-stage research and development, through to wider capability advice from innovation advisers. That is an important point to stress. Yes; they are different, so, in recognising that, our support packages also need to be different.

The Chairperson: You referred to the total expenditure on research and development in Northern Ireland in 2010. It was £521.4 million, which was an increase of £36.6 million, or 8%, on the 2009 figure. My understanding is that the largest chunk of that comes from the top companies here. That reinforces the point that you have been making. I suppose that, if we really want to see a significant increase in actual research and development, the only solution, going back to what you said originally, is to attract high-quality companies to Northern Ireland.

Mr Hutchinson: Yes, and aligning them to our skills. The danger is in attracting value-added FDI that sits in splendid isolation from other companies in the local business space. The lesson that we learned from other countries is that you must align your pitch for FDI to sectors where we already have strengths, albeit in small companies that are active in those sectors. Then, you seek to ensure that there are supply chain linkages, particularly if they are in manufacturing. If they are in tradable services, we have other forms that can link them to large companies. Evidence shows that that is the way to ensure the biggest impact on productivity and export performance.

The Chairperson: That is the five markets that have been identified under MATRIX?

Mr Hutchinson: Yes. Again, the emphasis is that they are defined by business. It is not government saying that those are the areas; it is business. We have worked with business through that MATRIX work, which Bernard was leading. You referred to his rather elongated title earlier, Chair. It really asks whether they will be the sectors for ever and a day, and the answer is no. We need to keep refreshing, and that is where foresight and horizon scanning come in. As I said earlier, those areas already account for three quarters of our R&D and export performance. MATRIX has already started to look at the green economy and sustainable energy to see what global market opportunities exist in that sector for local businesses.

The Chairperson: I have one final point on European funding. Our drawdown under framework programme 7 does not seem to have been very successful. I know that you are doing work on Horizon 2020. Are you confident that you can increase the drawdown? I suppose that it depends on an awful lot of factors, including the responsiveness of the European Commission to reform the Horizon 2020 funding processes. How do you view it at the moment? Are you optimistic or pessimistic about change?

Mr Hutchinson: For my team, I always try to retain a positive and optimistic outlook on these things.

The Chairperson: Just like myself. That is why I am in politics. *[Laughter.]*

Mr Hutchinson: I am not sure whether I should rejoin by saying that that is similar in the Civil Service. *[Laughter.]* The key issue is that the building blocks are there to ensure that we maximise a greater level of drawdown than we have to date. There is work with the Horizon 2020 co-ordinator and the strategy to establish thematic leads under those priority areas. We now have people in Brussels through Invest NI and the Barroso task force working in those areas on a two-way level: to the Commission, to emphasise that we are open to maximise or increase our drawdown; and also locally through Invest NI, with executives working with companies that are already in receipt of R&D and are more likely to make applications to framework 7.

We certainly have actions in place to ensure improved and maximised drawdown. However, it goes back to the challenges of an SME-based economy. It is a costly and elongated exercise for many companies to engage with framework 7. The challenges are recognised.

Mr McGarrity: Can we do better? Yes.

The Chairperson: That is the question, I suppose.

Mr McGarrity: Yes, absolutely, but, as Graeme outlined, we recognise that. That is why we went through the process and the Committee saw the conclusions of the cross-sectoral group. It was not government saying this, but business, academia and government working together on the opportunities that do exist and the actions that we need to take to improve our participation. However, government does not draw down on the framework — we have to encourage, support and cajole.

We can improve. However, going back to the point that we made at the start, R&D is relevant or applicable to only a number of companies here. It is about the broader concept of innovation. Indeed, Horizon 2020 goes beyond R&D, in recognition of that point. There is recognition that we can improve, but in the context of growth in the wider economy, we can also take other actions closer to home. We should not lose sight of that.

Mr McKay: One respondent raised the issue of increasing funding drawdown from Europe, and recognised that Invest NI is very supportive. However, it is completely different from Enterprise Ireland, which is much more supportive and advanced in that area. Is that something we could look at? Is there co-operation with Enterprise Ireland on this or opportunities there to up our game?

Mr Hutchinson: The challenge is that it is a different economy in the ROI. It has more academic institutions and more value-added companies, given the policy lever it has had for many years of low corporation tax. We have had discussions with them and they themselves recognise the challenges that even they have in maximising drawdown. Comparing them with where we are at the moment, however, is slightly unfair because of the nature of our business base here and the fact that, traditionally, with academia, we are talking about two higher education establishments in the North.

We certainly continue through Invest at a policy level to work with not only Enterprise Ireland and others, but we have meetings with the Technology Strategy Board in GB because this is a systemic problem across all countries.

Mr McKay: We know that Bombardier or Shorts have linkages with the University of Galway. Universities across the island are already involved in R&D, so you need to look at where that is available, as well as across the water.

Mr Hutchinson: We consider innovation vouchers a very effective mechanism on the innovation side. There is scope to access providers who can work and collaborate through innovation vouchers on a North/South basis. We recognise that. I suppose my only point is with regard to the Chair's point about how ambitious we can be, going forward. You may consider this a defensive point, but the NI business base has not changed materially. It is still micro-based and many companies in many sectors consider R&D to be something that they have not embraced before, so it is a matter of overcoming that challenge.

Mr McKay: Some of the respondents that we have already heard from have criticised not only the culture in the business community but the culture across the public sector. There is responsibility for R&D in OFMDFM, and respondents have raised the issue of the Public Accounts Committee (PAC), and so on. How is the Department looking at and raising that issue cross-departmentally to try to address it? I recognise what you said about bringing in Mike Kitson from the University of Cambridge. However, historically, government has not used local universities as much as they could; it has steered more towards using consultants than universities. Can we change that, and are we changing that?

Mr Hutchinson: On your second point about Mike Kitson from the University of Cambridge and other academics, in our research programme we have been more academic focused than consultancy based. That is by dint of the fact that the output is and has been more value added.

On your previous point about what we are doing, the Department set up a steering group to review the support structures that we have — I mentioned this in my opening remarks — for maximising drawdown. The steering group was cross-departmental and also included members of the CBI and the science park. It was set up with a view to saying that things are clearly not working as well as they should, and asking what we need to improve.

One of the key things that came out in that review, which Ciaran led, is the need to have someone to co-ordinate across businesses and academia the potential for companies and academia in framework programmes. We will appoint a person shortly to fulfil that role. As part of that exercise, we also saw the Commission place an emphasis — in the context of Horizon 2020 and, to a lesser extent, on framework 7 — on smart specialisation. Earlier this year, someone was appointed from within the Department specifically to work on smart specialisation. They will develop that strategy, which will be part and parcel of the programme. They will identify the key areas that we will prioritise and how we ensure that there are greater linkages between the different people to support and maximise drawdown. Have you any points to add, Ciaran?

Mr McGarrity: On the comparative analysis, the Republic of Ireland is a member state of the EU. That is why its regional contact points in the network, for example Enterprise Ireland, have direct access to Brussels. We are a region of a member state, and the UK has similar support network of contact points. So, in that sense, we are not comparing like with like. The point is that, in moving forward, we can improve the co-ordination across government, as Graeme outlined. For example, we now have DHSSPS, DOE and DARD taking a more proactive approach to the whole concept of recognising the framework. That is because constituents and stakeholders of theirs will or could be key participants in the framework programme. That is starting to move forward, and the Committee has seen the recommendations that emerged from that framework group.

To reiterate what Graeme said, DETI's commitment includes putting resources in place now to bring all of that together to identify where additional resources are, such as thematic leads or advice on how we bring universities and business closer together in the framework. Universities are the key driver in this.

Mr McKay: Chair, I have a quick point about an issue that we raised before this session. This is not the first time that the Committee has had papers arrive late. I think all members expressed their disappointment at that, and we certainly accept your apology. What was the reason for that lateness?

Mr Hutchinson: We have had a really busy period because of work on the economic strategy, corporation tax and regional aid issues. I can only reiterate my personal apology for getting the evidence to you at such late notice. I will take back and reflect to the relevant people that you have indicated that this is a wider issue.

Mr McKay: My concern is that the Department and you, as civil servants, also deal with businesses and FDI opportunities. If this is happening not only to us but to other parties that you deal with, that is a serious concern. The fact is that this is happening across Departments and the Assembly, and it is simply not good enough at this level of governance.

Mr Frew: Gentlemen, thank you for your presentation and your answers so far. I want to explore an area that came up every time we received a presentation during this inquiry. That is the need to have a change of attitude to the tolerance of risk. I had 20 years in the private sector, and I also declare an interest as a former member of the PAC. I understand that everyone on that Committee has a job to do, and I took it as seriously as anybody else, if not more so. We have a job to do in scrutinising how we do things, our performance and the decisions that we take. However, sometimes, as I sat on that Committee, I would have loved an official from a Department or a government body to have said, "You know something, we took a risk, and this time it did not work out." I wanted to hear them being that bullish. As a government, we have to take risks. In the private sector, those businesses that do not take risks every day are the businesses that do not grow and the businesses that die. If we want our economy to grow in the way that we say we do, we have look more like and be more like the private sector. If the witnesses to this inquiry have not made outright criticisms, they have acknowledged that it needs to change. What would you say to that? How would you counter it?

Mr Hutchinson: Having gone through the evidence, I know that the science park and other contributors were very clear in articulating their view of the need to be more tolerant to risk. As a civil servant, the obvious point to make is that, although you cannot de-risk projects, you can put mechanisms in place to manage that risk. That is a point that IREP, or the Barnett review, made. I was secretary to the panel that carried out the review, and it was clear on the need for Invest NI — it is, as the panel put it, the "tip-of-the-spear" of the support from government and the Executive — to have a mechanism to support more projects, and especially innovation and R&D projects that are traditionally riskier.

Within the powers that we have, we have taken some steps towards that. For example, we have given Invest NI more autonomy, although it still has to operate within the usual green book mechanisms of approving and appraising projects. Another recommendation that IREP made was that we should look at how we evaluate and assess innovation and R&D projects. We did that, and that led to a change in Invest NI's appraisal mechanisms, not for the purposes of risk avoidance but to see how that risk can be managed and, more importantly, how we can capture the non-specific and wider benefits from innovation and R&D projects that will spill out from companies to the region and beyond.

In summary, Paul, as far as we can, we have taken steps to address the issue. It is a wider issue than just saying that the Department needs to embrace DFP, the Audit Office and even the PAC, as you mentioned. MATRIX also highlighted that as an issue and recommended that we should have a portfolio approach to risk. That would mean that, as you said, some projects would fail; however, if we have a basket of projects that, overall, positively add value to the economy, those would get the green tick.

Mr Bernard McKeown (Department of Enterprise, Trade and Investment): I will to add to that and take a step back to the earlier point about encouraging smaller companies to engage in R&D and innovation. One of the priority areas that MATRIX identified was that of collaboration and encouraging companies, universities, FE colleges and other institutions to work together towards identified market opportunities. In itself, that brings an additional tier of concern about how risk is managed as there are so many partners involved. MATRIX continues to look at what it has described as a "first stop shop" to help to navigate through the various support mechanisms that are available. What is needed in such a context is not so much a single point of entry but someone who knows how to get through the various support programmes and the various advice and guidance on entering the services available. That would then allow the system to work more efficiently. It does not mean changing

anything. It simply means putting a management structure in place that can oversee and overarch a number of sectors and a number of ways of doing things.

I think that the need to further build on some of the MATRIX work has been touched on in what has been described as open innovation, which is encouraging more partners to work together in order to bring to the table a greater degree of capability and to build more critical mass into the process, as the Chairman said at the start. A number of support programmes in Invest NI could be agglomerated, because they would behave much more effectively together than they do apart. Likewise, there are other players outside government in universities, colleges and businesses' research bases where things could be done better together. Collaboration would help to deal with some of those risk issues as well.

Mr Hutchinson: In summary, we recognise that it is an issue. If that point were made in Europe, via the report, we would certainly see that as helpful, because, as I said, we are only one part of the bigger picture. There is a building consensus, through MATRIX, IREP and the Committee, that this is a key issue. A knowledge-based economy will bring more risk than one not based on knowledge, because it requires investment in areas where future streams of revenue are uncertain. However, you are still dealing with government money, so there is a balance between putting in mechanisms to manage the risk and, at the same time, running the risk of a risk, as you indicated in your question.

Mr Frew: I want to take that a stage further. What I say might be controversial, but I say it with a private sector hat on. Is there an acknowledgement that we are ready to invest in failure in order to gain knowledge? That is maybe hard to get your head round. Are we there yet? Do you see signs that we could move to that position? This is a societal thing; it is not just government. The media and everybody else will latch onto something that fails and beat it until it is black and blue. Then, they will leave it and move on to beat something else. However, out of that, there could be growth in indirect ways that nobody will ever foresee. Hindsight is a wonderful thing; it is great. I suppose that PAC has lumps of that, as does the Comptroller and Auditor General. Are we in a position where it would be acceptable to invest in failure in order to gain knowledge?

Mr Hutchinson: I do not think that we are there at all. However, I think that we are in a better place than we were in 2008 following IREP, which was academic-driven, with some private sector people on the panel, such as John Wright, ex-chief executive of Northern Bank. We are certainly giving that message very clearly. As I said earlier, that led to Invest NI having increased autonomy and relooking at its appraisal mechanisms. Some changes have been made. However, I do not think that we could have gone as far as you indicated in your remarks, because we are still custodians of public money and need to make sure that we abide by all the rigours that are there for good reason, in respect of governance and ensuring spend is put in the right place at the right time.

The Chairperson: Arising out of what Mr McKeown said to Mr Frew in relation to a one-stop shop, I take it that you mean that in respect of assisting people who are trying to access research funding either from Europe or from other bodies, but principally Europe?

Mr McKeown: Not principally Europe; by whatever means are available. It is certainly an area that we have looked at since the MATRIX report identified it. We conducted a series of mapping exercises to identify the sorts of innovation and R&D support that are available across the region. There are many, and many are complementary. The challenge that we are looking at in the next step of that is how we put in place a system of management that makes it seamless to tie those support programmes together and put in place a team or series of individuals who are capable of understanding the full plethora of what is available, not just — it is important to say — what is available from government and from public funds but what businesses bring to the table. It is not always funding that is the issue. Sometimes it is advice, knowledge, mentoring, association with other businesses and working into supply chains. Without wishing to labour the jargon, it is touching on an open innovation model, in which companies, academia, government and all the institutions that play a part in the system are working with one other. MATRIX identified that they could do that by working with business to identify main market opportunities, which touches on Graeme's point about smart specialisation, identifying what the region does particularly well and where the future global markets are going to be, which we

know we will have the capability to move towards. That kind of model is being looked at for collaborations.

The Chairperson: You referred to a mapping exercise. I would be interested in that if it is available. Where would you put the one-stop shop? Would it be in the Department, in Invest Northern Ireland or outside any of those?

Mr McKeown: It would need to be what Mike Kitson, in the work he has done for us to date, described as boundary spanning, which means that close association with one sector, one discipline and one organisation would probably not be where it should ideally be associated. It should have the ability to work on an equal footing and in an objective way with business, government and academia. I suspect that it would also require people with remarkable skills — they do exist — who can work in those three environments and be comfortable in them, and who also have the ability to identify market opportunities and understand the needs of the participants. I suppose that, if our thoughts are leading anywhere, they are leading towards seeing the science park as an ideal host.

The Chairperson: That is interesting.

Ms J McCann: Thanks very much for your presentation. It is very interesting listening to you answering some of the questions. You are basically saying that there are two levels. There are the smaller and medium-sized microbusinesses and innovation that is going to make them grow, create employment opportunities and market whatever product they are going to do, and then there is the wider knowledge-based skills base that you can sell either to those companies coming in or to the international market to export your expertise. I am just thinking about what you were saying there. I was going to ask a different question, but you were talking about the collaboration and that. Even in some of the smaller businesses, for instance, if it is a knowledge-based product they are going to market — I am looking at the life and health sciences, for instance, maybe some sort of research on drugs or that type of pharmaceutical small business — it is about trying to drawdown the funding for some of those smaller businesses. Maybe the expertise that they have could be exported to other markets if there was some more help through the like of Invest NI or whatever.

It is not just about financial help all the time. It is about support and encouragement. I worked in funding for a while in the community sector, and sometimes you can fit an application into the funding criteria, as opposed to the other way around. I am just wondering about something like that one-stop shop that you talked about, for instance, so that people could go and access information on how they go about that. I agree with you that, for a lot of smaller businesses, it will be about innovation, not research and development. I think that you could work collaboratively with some of the regional colleges, for instance. We were up at the South Eastern Regional College (SERC), which seemed to work very well on renewable energies. There are some ways of looking at it. Could that be put in place? From what the other group was saying, there seems to be a lot of funding there from Europe, but it is just trying to draw it down. If that type of small group of people could be put somewhere where people could go and talk that all through, and, as I said, fit your application into what the criteria are, would that be an option?

Mr Hutchinson: Absolutely. As part of the innovation strategy, these guys have been harping on about the issue of a map. MATRIX may have done it, but the Department leads on this innovation strategy. In some senses, the innovation and R&D market is chaotic, and there are so many actors and players involved in giving financial and non-financial support. So, at the very least, at one level, the innovation strategy can articulate externally what is needed by whom and where you go for that support. That will be done as part of that innovation strategy. Secondly, as Bernard has indicated, one of the actions in the economic strategy is to explore open innovation with NISP, and Mike Kitson has been involved in giving companies advice to develop their capabilities. We certainly see that that could be a role that the science park could perform, because it is not necessarily about giving finance, as you said, Jennifer.

Ms J McCann: You mentioned some of the emerging economies, such as Brazil, Russia, India and China. There is not a lot of knowledge about that, particularly among smaller businesses. Again, it is about showing people the way for the future, because it will not be the same old same old if we are to

grow the economy in the way it needs to be grown, particularly if we are to create employment for people. We need to map out that role and path for people, and we need to look beyond at what the future will be.

Mrs Overend: Thank you very much for your presentation. Some of my points have already been covered. We are talking about the barriers to R&D, and in your paper you did not include lack of awareness, information and understanding of opportunities. That is really what we have been talking about. That seems to be a major thing. I visited my local further education college and the InnoTech Centre in Cookstown, and the work that it is doing with very small businesses sounds absolutely fantastic. Those businesses get to know about that through word of mouth. I do not know how that is being promoted. They just find out from somebody else who was successful. We need to build on that. We also need to keep contact with those companies and further develop them. You talked earlier about networks, and it is very important to continue contact with those.

Mr Hutchinson: We talk about the triple helix; it is about academia, business and government working together. Given the make-up of companies in NI, they may be, and traditionally have been, more likely to link to the colleges but not necessarily to HE. It is not either/or; it is both. As you say, rightly, it is about trying to articulate what is happening and what more could happen to facilitate that collaboration. Every road seems to lead back to improving knowledge of what is available and to collaborate to ensure that we are all — in government and outside of it, in academia — working to a shared objective, which we hope to articulate clearly in the innovation strategy.

Mrs Overend: What they are doing should be collected by government because we need to concentrate on and build upon the skills. We need better communication.

Mr Dunne: I welcome the panel. Thank you very much for your contribution; it has been very informative. We have had several sessions on this, and a lot of evidence has been gathered. We are all very aware that an awful lot of genuine facilitators are trying to do very much the same job. I know that you have touched on that, but I have written a note saying that something needs to be done to, perhaps, bring them all together and to make sure that there is not duplication and that industry and commerce are fully aware of what is going on and what is available. We have all been impressed by what we have been shown and advised on, and new members especially are very much impressed by the commitment to do something about trying to move the whole economy forward. Is there a risk that, with so many different players doing their own thing, no one is looking at the overall strategy and how it is delivered?

You mentioned innovation, and you said that very few firms are innovation active. Graeme, will you elaborate a bit more on that? I think that you said that one or two of the big players were at that stage. The other points have been well covered. What strikes us is the poor pick-up by firms. We were at a large pharmaceutical company; you will know which one I am talking about from the evidence. We were surprised that it was not accessing European funding, and we wondered why it never bothered or never got round to it. We all have our own feelings. It has other sources of funding because of the work that it does for other players. I felt that it put the onus back on us a bit to try to put more pressure on Invest NI to take more risks, as my colleague talked about earlier. There is a belief that Invest NI will go so far but not far enough in relation to getting involved in the larger areas of risk and trying to move the whole thing forward.

We have heard an awful lot of evidence about SMEs and how difficult it is for them. They are busy doing the day job, which they have to do to succeed. They do not want to get diverted and take risks that they feel are not worth taking. So many companies are unwilling to get involved because there is a risk of a transfer of knowledge. If they work on design or innovation, there could be leakage. Those issues need to be addressed as well to give people assurances. I always remember the issue of trying to get partners in Europe for SMEs. That is most difficult for small firms throughout Northern Ireland. It seems to be very difficult, and we certainly received evidence that it was.

My last point is about Horizon 2020. What can we all do to make sure that it is smarter and more accessible to all the various players? Sorry about that; I have rambled on, but there were a number of points.

Mr Hutchinson: I will respond in no particular order. So many individuals and organisations are involved in stimulating innovation, R&D and creativity, as the economic strategy has outlined that, if we do not have an innovation strategy that articulates who does what and when, and how companies can access support and communicate what support, financial and otherwise, is out there, that risk would very much materialise.

If SMEs or any companies collaborate with one another in sectors in which they could potentially be competitors, especially in innovation and R&D, in which intellectual property (IP) becomes an issue, there is always a risk with open innovation concepts about how you manage. Innovation centres are being opened in Finland, Sweden and Israel. Any knowledge-based economy will have them to a large degree. The risks need to be managed rather than sidestepped or avoided. They can be managed. With MATRIX, we have seen companies coming together and collaborating when they see the global market opportunities that are presented to them. They overcome the concern or risk that they have with each other when they see the potential for growth through exports and the global engagements.

On Horizon 2020, we have actions in place to ensure that we are in a better place to maximise drawdown. The EU Commissioner for R&D has been over, and Minister Foster really stressed the need to simplify that procedure for SMEs in particular. We understand that she will be making a subsequent visit later this year, and those points will be made again to ensure, as best we can, that we can make it as easy as possible for SMEs to engage in the framework collectively to get drawdown of this programme for NI.

Mr Dunne: There was a point about the larger companies not getting involved. Is there a risk that, rather than going for European funding or going after Invest NI, which is, perhaps, more accessible and more customer-focused —

Mr Hutchinson: It is more local.

Mr Dunne: That is right; it puts the onus back on us to make sure that Invest NI is as flexible as possible. I gathered that and thought that it was an issue.

Mr Hutchinson: That is coming up in our discussions; it is certainly very much an issue with framework 7 funding.

Mr McGarrity: There is a key point, and I made it at the start. We can put all the support that we can in place, but it is firms and universities that make the applications. It depends on what stage a firm is at in a project life cycle, as to whether it will go to framework. Framework 7 funding is not immediate cash flow. You have heard the evidence. There is a lot of time involved; there could be 18 months between submitting an application and seeing a drawdown of finance. For an SME, that is out, but a larger firm might not need it.

There are many good examples of firms in Northern Ireland that invest in framework projects. It is about collaboration with partners throughout Europe and about new expertise and new knowledge. The firms you mentioned may not need it at that point in time. How do we get them to do it? It comes back to visibility and culture, which we mentioned at the start, and it comes back to collaboration. We need more Northern Ireland companies collaborating with firms outside Northern Ireland, whether that is through a framework programme or through separate trade agreements. It is about sharing knowledge and learning from experience. That is what we need to do. If the Committee's inquiry is going in the direction of looking at what can be done, it is about visibility and the need to lift our heads above the parapet and exploring ways to make new connections.

I want to pick up on your point about how SMEs find partners. On a practical level, Invest NI runs the Enterprise Europe Network, which we will tell you more about next week. It exists specifically to help and support SMEs in finding partners across the European Union. The support is there; the issue is visibility. They work very hard at trying to engage with companies and in helping companies to identify potential partners. The partner might not be there, but it helps companies in trying to identify potential

partners in academia and businesses across Europe. There is support; the issue is about getting companies in and wanting to access it and letting them see how to access it.

The Chairperson: I think one of the points in relation to the company mentioned by Mr Dunne is, or was, the elongation of the application and the practical outcome with regard to the commercialisation of whatever was being produced. In addition to that, there was the subject area, because the European Union has certain subject areas, and I think it did not quite fit into the subject area.

There are no further questions from members, but I would like to know your views on venture capital. We have heard that there is insufficient venture capital. It does not feature very highly in what you have submitted to us, but I presume you will agree that there is a need for venture capital here, but there is not enough. Can anything be done about it? How important is it with regard to R&D?

Mr Hutchinson: Venture capital is critical, as is, more widely, risk capital with equity investment. Through its access to capital strategy, Invest NI has the growth fund. It is debt financing for small projects. There is also the co-investment fund, which was recently launched. Minister Foster announced it a few weeks ago. That is about stimulating non-banking sources for access to finance for business expansion. It cannot be seen in isolation from innovation, R&D or Invest NI's support packages. Maybe it is an issue for us to ensure that we articulate that it is about innovation, R&D and creativity, alongside access to capital, which Invest NI is supporting through its various initiatives. Companies that might not be able to avail themselves of traditional sources of financing can go there, nonetheless. Obviously, it is a question of scale, and Invest NI can only do so much with the finances that it has and that it can lever through the private sector. However, we have the NISPO funds, the co-investment fund and the growth loan fund. In excess of £100 million is going, or at least potentially going, into the private sector for companies to avail themselves of in these areas.

The Chairperson: In its submission, AFBI said that European funding was very difficult to find and that companies were not drawing down funds. However, they also mentioned the UK Technology Strategy Board, and the fact that there was not as big a take-up of whatever funding it might have available. Do you agree with that?

Mr Hutchinson: We work through Invest NI with the Technology Strategy Board on initiatives and knowledge transfer. The chief executive of the Technology Strategy Board hopes to be here in April.

The Chairperson: AFBI raised that issue, and, perhaps, you could ask him about that. There does not seem to be sufficient interest or enough successful applications from Northern Ireland firms. That is something that might be looked at. I understand the position about European funding, but this should be an easier route, and I am not sure why that situation exists.

My final point is about the centres of competence. Are they up and running yet?

Mr Hutchinson: We have an action in the comprehensive action plan to establish four competence centres in —

The Chairperson: Yes, I noticed that. Is that a work in progress?

Mr Hutchinson: Yes, it is a work in progress.

The Chairperson: OK. Thank you very much. This has been a very useful conversation. If we have any further questions, we will write to you, and I am sure that you will give us a response.