HOUSE OF LORDS

Revised transcript of evidence taken before

The Select Committee on Digital Skills

Inquiry on

DIGITAL SKILLS

Evidence Session No. 15 *Heard in Public* *Questions 192 - 204*

TUESDAY 28 OCTOBER 2014

11.15 am

Witnesses: Angela Harrington, Gary Warke and Gerard Grech

USE OF THE TRANSCRIPT

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

Members present

Baroness Morgan of Huyton (Chairman)
Earl of Courtown
Baroness Garden of Frognal
Lord Giddens
Lord Haskel
Lord Holmes of Richmond
Lord Janvrin
Lord Lucas
Lord Macdonald of Tradeston

Examination of Witnesses

Angela Harrington, Head of Regeneration, Manchester City Council, **Gary Warke**, Board Member and Business Development Board Member, Humber Local Enterprise Partnership, and **Gerard Grech**, Chief Executive Officer, Tech City UK

Q192 The Chairman: Gary Warke is stuck on a train somewhere that has not moved for at least 40 minutes, so if he comes from the LEP in Humber, then we will just slot him in and we will just keep going. We cannot wait for him, in case the poor soul never arrives, so we will have to ask for some written evidence, if necessary, I think.

So, welcome and thanks very much for coming. I will do a bit of background first. You have a list of the interests that Committee Members have declared. That was done back in July. That is in the transcripts. This is a formal evidence-taking session of the Committee and a full shorthand note will be taken. It will be on the public record in printed form and also on the website. You will be sent a copy of the transcript and you can revise it in terms of any minor errors. This session is on the record, it is being webcast live and will be accessible via the parliamentary website. You are very welcome to submit written supplementary evidence and, indeed, we may ask for it if there is anything in particular we are interested in that we want to follow up. I am advised to tell you—and in fact all of us—to speak up clearly just to make sure we all hear each other. That is by way of background.

I will get you to introduce yourselves, and if you wish to make any opening remarks, you are very welcome to do so. If you do not want to, we will head straight into the questions, so it is entirely up to you. Ms Harrington?

Angela Harrington: Hello, my name is Angela Harrington. I am Head of Regeneration at Manchester City Council. By way of background, we work with a range of partners in Manchester and across Greater Manchester on digital skills and how we engage, how we develop and how we future-proof our skills.

The Chairman: Thank you. Mr Grech?

Gerard Grech: My name is Gerard Grech. I am CEO of Tech City UK. If that is okay, I would like to make an opening statement.

The Chairman: Yes.

Gerard Grech: The future of any nation is creative, innovative, efficient and forward-looking. The UK has a history of being at the forefront of innovation and openness. Tech City UK was established by the Government in 2010 to promote and accelerate digital growth in Shoreditch in East London. In 2014, our remit was extended nationwide, precisely because of the growth in digital innovation around the UK and the opportunities it offers. As an organisation, we work in partnership with the tech community, the wider business community and with Government to support digital growth at every stage of a digital business, from idea, to start-up, to IPO, and everyone from solo entrepreneurs to first-jobbers, to mid-career professionals, to future billionaires.

Our purpose is to accelerate the growth of digital businesses in the UK. We do this in three ways: first, by delivering programmes that help entrepreneurs progress to their next stage of growth. As an example of this, we are launching the Digital Business Academy with Cambridge University and UCL precisely to teach anyone to start, grow or join a digital business. Secondly, we facilitate a responsive dialogue with Government; and thirdly, we champion and connect digital growth businesses across Britain. Specifically on regional growth, our Cluster Alliance programme has identified 13 distinct clusters with potential right across the UK. They are at different stages of development, with distinct strengths in different aspects of the digital economy.

Finally, there are four crucial components in building a successful tech cluster. They are: local leadership committed to digital growth and an existing digital community, local infrastructure, including transport, broadband and property, access to finance, both seed capital and growth capital, and finally, a talent pool. Thank you very much.

Q193 The Chairman: Thank you. Your list of four is very much some of the things that we will be pushing on and trying to find a bit more out about today, so thank you.

Perhaps I can start with a general question which is probably fairly obvious: how significant do you think the digital economy is as an economic priority for your area and what prospects do you see for jobs, businesses and investments on the back of that? Also, on the flipside, what are the barriers at the moment to realising the objectives that you are setting yourself? Perhaps we will start with Manchester.

Angela Harrington: In terms of Manchester, there are about 7,500 to 8,000 digital businesses and enterprises employing about 45,000 people. Our estimate is that there are probably another 45,000 people in other sectors who work in digital as their background. The Greater Manchester Forecasting Model expects the sector to grow by 70% between now and 2025, and employment growth of about 16%. Currently we estimate it is worth about £2 billion, and so it is a very significant sector for the Greater Manchester economy and is probably the second-largest, just behind financial and professional services. Greater Manchester is the second grow point outside London for digital growth.

The Chairman: In terms not of digital specialist businesses but of the wider skills agenda and the inclusion of digital within that wider skills agenda, how important is that in Manchester?

Angela Harrington: Hugely important. I agree with my colleague, it is one of the pillars in terms of facilitating or enabling the growth. I suppose there are a couple of challenges or opportunities in the digital sector from a Greater Manchester perspective. The challenges are that the sector is fast-paced and technologically fast-moving. It is difficult for the traditional skills and education system to keep pace with that and the funding mechanisms do not allow that to happen fairly easily. The digital sector itself is predominantly small and some is micro. It tends to recruit graduates as a preference and there is not a lot of investment traditionally in developing their own skills base, but recognises much more that that is where they need to go and have a much better grasp of what they need to do locally.

I think, in terms of opportunities, the Greater Manchester Employer Ownership of Skills pilot, for example, invested in 165 new digital apprenticeship starts in new sectors. That included bringing in specialist providers from Sweden, around the games programming sector, and doing higher level and advanced skills. There are opportunities both to engage better with employers and to be more responsive in terms of how digital skills are developed.

The Chairman: Thank you. Mr Grech?

Gerard Grech: It is estimated that the digital economy is currently worth about 10% of GDP. It is set to grow to—

The Chairman: Mr Warke, welcome; we have just started. I am sorry to interrupt you, Mr Grech.

Gerard Grech: No problem.

The Chairman: I gather you have had a terrible journey, so settle yourself down. We will keep going, but we are just on the first question. Sorry, Mr Grech.

Gerard Grech: Just to repeat that, there are current estimates that show the digital economy is worth around 10% of GDP. It is set to grow to around 16% within the next five years, growing at around 11% a year, and it is one of the fastest-growing in the G20. When you look at London, in the last three years 27% of new jobs were created in tech and, according to some publications, it led the recovery in London. What we are seeing is that digital technologies are crossing over into established industries, like financial services, so we are seeing that London is quickly becoming the epicentre of FinTech, which is the crossover between financial services and technology.

One publication based in New York argues that there are more people working in FinTech here than there are in New York or Silicon Valley. To put some numbers against that, it is about 44,000 people working in FinTech in Greater London, versus 43,000 in New York, versus 11,000 in Silicon Valley. I think the reason for that is that you have very established industries that are being very open to the digital innovation that that brings, and how that crossover and collision is happening that is driving the next wave of digital innovation.

It is very important, and clearly London gives us a great story to tell. But we are seeing complementary skills in many other cities and regions. Cambridge is obviously very strong in hardware; Edinburgh is extremely strong in artificial intelligence; Belfast is extremely strong in cyber security; Manchester is clearly very strong in digital media, among other things, and Bristol is strong in robotics. I think the combination of these skills is what is very important for the UK Government to see. It is making sure that we are joining up all those skillsets to offer up a joined-up technology proposition to anyone who is looking for investment and hopefully create jobs here.

The Chairman: Mr Warke, are you ready to kick off?

Gary Warke: Yes, I am. My apologies for a late train.

The Chairman: No, not at all. No, we understand completely. We have just had a general first question about the importance of digital to the economy. Can you talk to us about that from the background of the LEP?

Gary Warke: Yes. The LEP that I represent is the Humber LEP—Hull and Humber LEP—and the region has identified the digital economy as the second fastest-growing area in our region, after the renewals and offshore wind. For us, it is the fastest-growing sector outside London for the digital sector. As such, the Local Enterprise Partnership, Humber has established quite a significant infrastructure around a strategy group to drive that around skills, around investment and around marketing for our particular region. The region has a strong area currently with digital gaming and content creation, and the creative sector is quite strong. Also the region benefits from the biggest investment through Kingston Communications, which is our infrastructure in terms of IT, which is the fastest broadband investment in the UK; so building on the investment we have within our region for that, coupled with what we see as a significant strength around the skills of what we have within digital, huge investments are going in from the LEP to take that to the next level.

The Chairman: Tell us about the Kingston infrastructure. Who is funding that?

Gary Warke: It is a privately owned telecommunications company. The Humber region is quite unique in that it is an island itself, in terms of its telecommunications infrastructure. That investment is significant because of what that will do for the region, in terms of its connectivity and the broadband-speed reach that will have.

The Chairman: Thank you very much.

Q194 Lord Haskel: You have told us about the importance of the combination of skills and facilities to create a worthwhile hub. Can you tell us: what are the roles of the different stakeholders in the hub; for instance, the university, the Chambers of Commerce, local government, LEPs, the third sector? What role can each of these play and, indeed, how are you going to bring them all together?

Angela Harrington: In terms of Chambers, if we start there, the key role is employer engagement and the ability to have employers actively shape and contribute to the skills development of their existing and future workforces. That is hugely important in this sector. In Manchester, the Chamber has a liaison with Manchester Digital, which is one of the trade bodies that represents the digital sector, and they have come together and set up an employer skills group. That was established to develop the programme around the Employer Ownership of Skills pilot for the digital sector and the work is continuing.

For example, Manchester Digital runs a skills festival every year, where it surveys its constituent organisations and identifies where the skills shortages are and what some of the opportunities are. It has a conference and a talent day where young people in the region are invited to present themselves to some of the sector, in terms of meeting some of the opportunities. Also, it works with schools so that young people in schools understand what the pathways might be and what the opportunities are, and then it has open days in the digital industry so that the wider public can see what the opportunities are. There is a huge amount that is very important in terms of employer engagement and employer contribution, and many of the active businesses also support code clubs in the city's primary schools, so they provide some of the volunteers and the resourcing for that, and increasingly recognise the need to get upstream and to be able to shape some of that curriculum.

In terms of local authorities, I think the local authority's role is manifold. One is creating the right infrastructure resources to attract investment in the digital sector. Again, if I use an example from Manchester, the Sharp Project is an example of use of a large old industrial warehouse that supports the creation of a large number of businesses in the digital sector. The local authority also has a role in terms of facilitating and bringing together businesses, the education providers in the city and ensuring that demand and supply are talking to each other and can better develop the responses. The local authority clearly has a role with schools, so we have worked very closely with the Manchester Schools Alliance and we have a strategic education partnership for the city, which very much has digital and digital skills on its agenda and looks at how it could and should develop those further. Do you want me to go on or to pass it to the next—

Q195 The Chairman: Let me push you a little bit. In a sense that all sounds fine, but I think one of the things that we are concerned about is how do we make sure that—what we are told is a great opportunity for the country in many ways—it is not just nice things happening in various places, but how do we get beyond the London-Oxford-Cambridge triangle to drive prosperity and competitiveness around the country? What is it that enables a regional hub to take off in a significant way?

Angela Harrington: Partly, I think it would be further devolution of skills funding to the region. It is at the city/region level where you can articulate best the demand and supply. I think there are examples on the ground, good examples around some of the work of the Chamber, but also the apprenticeship hubs through City Deals have done on this. I think further devolution of the skills budget—particularly if it is underpinned by a very robust labour market analysis—can help drive this sector.

There should be an ability to be able to incentivise certain route ways and pathways. So currently, if you look at the way FE funding is distributed, you are not particularly incentivised to be innovative, to take risks. The pace of technology in the sector far outstrips what you might do in your average FE institution. At a local level how can you deploy your skills budget so that you reward people who take risks? On the other end, you may equally need to invest more on people who are digitally excluded and who have a much longer journey to take. Again, for us at a Greater Manchester level, we are in a fairly good position to be able to do that, and bring together the sector and the education and the skills sector in a much more coherent way.

The Chairman: Thank you. That is helpful. Do you want to come back?

Lord Haskel: It is obviously a very complicated matter and there are a lot of elements involved. Whose job is it to make up for the shortfall? Is it central Government, is it local government or is it local employers? To get a cluster working, whose job is it to make up for shortfalls?

Angela Harrington: I am not sure there is a single answer to that, to be honest. In terms of any sort of skills deficit in the sector, clearly there is more that we could be doing at the education level, and that will be driven by the national Government and schools, and the school system in particular. The question there is: how do you get the kind of systemic work across the school sector, the right relationships with employers within what is a fairly crowded sort of reform agenda? Within that, how do you make sure that you do have employers going into schools, you do have young people going out to the digital sector and you do have the right careers information, advice and guidance? Once people are in work, focusing on the bridge between young people leaving school and moving into work, then employers have a much greater role to play in terms of shaping and contributing funding to upskilling and their own workforce and the future workforce.

The Chairman: Mr Warke?

Gary Warke: My view is that currently it is the Local Economic Partnership that will play a pivotal role in drawing that together in a vacuum of no glue within our regional economy. I think we see the LEP as playing that significant role. Within the Humber, the digital sector group that we have formed is in some respects trying to pull all that together. It comprises education providers, all the key employers and the key investors, and it has three key priorities in there. It is about raising the profile in terms of marketing, about what the regional hub can be for digital, for investment. Secondly, it is using our business development arm to help with set-up business, start-up business and so on. Thirdly, it is driving the skills agenda, so we are just about to set up a university technical college in the city, which has a digital technology specialism. We have launched our digital manifesto strategy for the region, so there are strong collaborative partners coming together to work. In the current environment, which is competition-driven in terms of skills education, the LEP are trying to bring that together into some form of a partnership for the region.

Q196 Lord Janvrin: Perhaps I can follow up and ask Mr Grech to comment on this, because in your introductory statement you said you were looking at 13 clusters. Are there common threads, along the lines that we have just been hearing about, as to why those 13 are where they are and why they have grown and so on? What has defined their establishment, if I can put it like that?

Gerard Grech: Absolutely. There are definitely factors that play into what becomes a tech cluster. If you take Edinburgh, there are very good computer science courses producing great PhD students with extreme knowledge in artificial intelligence, which is one core capability of the digital economy. In fact, there are many, many digital capabilities that you need: AI, artificial intelligence, machine learning, data science, visual design, user experience, and application development. There are multiple types of skills that you need in order to build the digital economy for the nation.

Lord Janvrin: Are you saying that the university is key? What else?

Gerard Grech: Universities play a role. That is the case very much in Cambridge. If you look at Manchester, obviously the arrival of the BBC is creating a huge cluster of knowledge and a critical mass of expertise around digital content development. ITV is now there, there is clearly a lot around television production and that is becoming quite critically known for digital content development. So there are factors; and on your previous question, Lord Haskel, it is very important to identify those assets very quickly and then foster them, nurture them and harvest them as soon as possible.

When I spent some time in Sheffield with the LEP there, they put up a slide and showed me that there was a critical mass of expertise around international distribution centres because of its location; it is literally by the M1 and the M62. Clearly there is a lot of knowledge there in international logistics, but if you cross that over with digital technologies, you could become known for digital innovation in international logistics, so that is an asset. I think it is important for local government and local councils to understand that as an opportunity, to make themselves distinctive enough around the UK and around the world for being known in that particular area. That is the combination of bringing in universities and making sure that they are producing perhaps courses in that line of business. Those are assets in themselves but may not be recognised immediately. That is my point.

The Chairman: If we take Sheffield, what you have just said is interesting. You identified an opportunity with the LEP. You went to a meeting and you discussed that with them. What happens next? What is your role? What is anybody else's role? How do we then make something happen? How does it get lifted up or how could it be lifted up? What is missing?

Gerard Grech: It is a great question. Yes, it was covered in the *Yorkshire Post*—which again increases the promotional aspect of the opportunity that Sheffield has in that particular instance. But I think it is local leadership that is quite important, and for that to be led by entrepreneurs in the area rather than by local governments stating what needs to be done. I think it has been proven, even in the United States, that these clusters form because entrepreneurs take the lead and government facilitates the growth and development of a cluster. I think that is quite important. It needs to be led by the community, and the role of local government is to facilitate and convene the right people and broker the right partnerships. But again, it is always led by the community.

In fact, TechNorth, which was announced last week by the Deputy Prime Minister, was very much led by the community. As part of the Tech Cluster Alliance, we facilitated that proposal into national Government and accelerated the proposal, but it was led by the community. I do not know if this is helping, but—

The Chairman: It is helping a lot, and Lord Macdonald is going to follow this up in a second. Lord Lucas, you want to come in. Is it on this?

Lord Lucas: Yes. I was looking at the two different models of the cluster, which is based around a particular technology, say Google Campus, which is based around a multiplicity of technologies and where you get a lot of cross-fertilisation. What balance should we aim for between them? If you just get particular technologies dotted around the country and they are not really talking to each other, that is not a functional system, and if you just have general groups like the Google Campus thing, you never develop a real expertise.

Gerard Grech: I think that is why it is important, and it is the role of local councils to identify what they are very distinctive in, or what are their differentiation points when it comes to the digital economy. Otherwise, if everyone is doing the same thing, then we are in competition with each other, and that is exactly the opposite of what we want. UKTI, the UK Trade and Investment organisation, is clearly selling the whole of the UK as a network of digital excellence and not pockets of innovation around the country. It is looking to promote a joined-up tech proposition. Obviously cities and regions are good at many things when we look at these things in digital, but what I am always encouraging cities to do is to tell me: what are you even better at? That in itself will make your proposition a lot easier for anyone to understand. So do you have a critical mass of expertise in data science? Do you have a critical mass of expertise in machine learning? This is quite important because when people come to look at the UK as a potential opportunity for investment, they will ask that question straight out: how many data scientists do you have in this country? How many machine learning scientists do you have in this country? That is clearly what they need in order for their headquarters or their local company to grow.

National Government has a role to play—and I think this is where we are seeking to play a role and will be issuing a report on this next month—as to the co-ordination of where this expertise lies around the country, which will help guide the local councils, as much as possible, about where we see a critical mass of expertise around the digital capabilities that you need in order to have a joined up digital proposition.

Q197 Lord Macdonald of Tradeston: You seemed to be arguing a bit earlier for a more purposive role for Government, because it had been essential in some of the clusters that had already been formed. When you think of it, whether it is the funding for universities or the direction pointed by UKTI to inward investors, or the various grants given to local authorities and so on, is it not for Government then to have a more purposive overview of all of this, to make sure that the perhaps under-informed councils are not wasting their time trying to compete with FinTech in London? You are obviously the most natural cluster in a sense sitting in Shoreditch just north of the mighty City of London. But when we get out to Sheffield, Belfast, Bristol and so on, do you not need a Government role that is more evident and more purposive than it seems at the moment?

Gerard Grech: A lot has been learned from Shoreditch and clearly that has put London on the international map, for sure. What we are doing through the cluster alliance programme is sharing those best practices and those learnings very quickly with other cities. TechNorth is the next step because it is only in this year that we took a nationwide remit in doing what we can to promote other parts of the country in the area of digital.

Lord Macdonald of Tradeston: But what I am saying is a lot of the areas that you talked about in terms of stakeholders are reliant on central Government money and leadership. Even the BBC going to Manchester had to be backed by Government, because there was a great deal of metropolitan and media hostility to that move. So should the Government be more prominent in saying what it would like to see and where it thinks people should be clustering together and active?

Gerard Grech: No, because every city has its own DNA, every city has its own history, every city has its own legacy, and I think the formation of a cluster has a lot to do with what it has been known for. You cannot really create clusters, you can accelerate the growth of clusters and you can stifle it, so you have to be very careful. I think, when you look at Shoreditch, the role that Hackney Council has played has been very progressive. Next month we are running a hackathon with the council and that is the council saying, "We have some things that we would like the community to come to us and provide us with solutions to some of the things we are trying to solve. We do not want to do this on our own. We do not want to do this in isolation. We are letting the tech community come up with the ideas that we are looking to solve". I think that comes to local procurement, so that is another way of funding the growth of local businesses and for local government and local councils to be open to testing and trialling new technologies with local companies or any types of companies around the UK.

Lord Macdonald of Tradeston: What is the role for the Government then?

Gerard Grech: For national Government? The co-ordination part is quite important and we are trying to do that as much as we can in our role, but again it is being led by other communities in different cities, and working with UKTI—to the point that my colleague was talking about—and when it comes to skills, I completely agree that that is obviously important. We have been very particular about our programme that we have put together, which is nationwide. It is open to anyone in the United Kingdom and it is available online, but local government can take that content that we have produced online and make it available face-to-face in venues all across the UK.

Helping universities, perhaps, play a more crucial role is quite important for me. I do not believe that entrepreneurship life and campus life are mutually exclusive. Universities are real conduits to businesses. Cambridge University and what it has been able to create around it is a very good proof in point.

I am probably not specifically answering your question but—

Q198 The Chairman: In some ways this is not entirely your remit so in some ways it is not fair, but I suspect what we are collectively struggling with is: you have described Cambridge and you have described Edinburgh and they both make complete sense. You then described a potential opportunity in Sheffield. I do not think you have helped us understand how that opportunity will be realised because to say it should be led by some entrepreneurs, if they are not there in Sheffield at the moment—

Gerard Grech: They are, for sure, and the question is: how do you encourage that?

The Chairman: Who is doing that? What is the role of the LEP? What is the role of the council? What is the role of Sheffield University? What is the role of Government? We are trying to understand what we should be recommending for that sort of opportunity to be realised.

Gerard Grech: I am assuming that LEPs have the right representatives to take those initiatives forward. The composition of the LEPs is quite important. It is not about protecting established industries; it is about also focusing on emerging industries in their local area. I do not know what the composition looks like but it is a must that the composition is balanced in the right way.

The Chairman: Lord Janvrin, you want to come in and then I am going to come to a LEP.

Lord Janvrin: I was going to ask what the Humberside experience was, yes.

The Chairman: Again, it will be different so far as you are concerned in the present structures.

Gary Warke: As I said earlier, I think the Sheffield example would be no different from Humber. The LEP I would see as the way of facilitating that. On the role of Government, ultimately, all 39 LEPs have developed their own strategic economic plans; they have been approved by National Government; so I would hope that Government has taken a helicopter view of what that means to each of those regional economies in terms of delivering skills, delivering investment and delivering impact. That is the way I would see that would happen.

Where we struggle a little bit, and where perhaps Government perhaps could help a bit further, is around ensuring that some of those investment decisions are joined up. So if you take something around skills, you might be investing in the UTC, you might be investing in a studio school, a plethora of initiatives that may not be the best return of funds in terms of ensuring you have that impact in terms of a skills agenda. There are some more intelligent decisions around joining up those types of decisions, which will allow us to free up some of the entrepreneurial work that we want to see in terms of investing in creativity in the schools and FE sector, which is largely unfunded and is relying on the goodwill within our region of some really exciting entrepreneurs and business people who lead and drive that.

Going back to what I think is getting all those variables around the table—around having the right skills people, having the right business people and having the right drive, passion and enthusiasm to take that forward—the only other thing I would say is that what we find in our area is that, while we have a large supply of high-quality graduates, they ultimately get jobs in London, so we are developing them but we are not retaining them. That is the key bit for Humber LEP; the investment part is critical to ensure that these excellent graduates we have in creativity design will stay within the Humber.

The Chairman: That is back to our Sheffield point—if there is an opportunity for new industry to develop in a different way then it is a matter of joining that up, is it not?

Gary Warke: Yes.

Gerard Grech: Also making sure that you are fostering the right conditions for growth in a particular distinctive area of expertise, so that people know you for what you are and what you are known for. That has a viral effect. You are attracting the best and brightest to that place.

The Chairman: Clearly in Manchester, presumably, with a digital media, people work there rather than are just skilled up.

Angela Harrington: Yes, absolutely. There is still some leakage of graduates but we retain more. The other refinement on that is you can keep them in the city but can you keep them in the sector, in terms of the smaller fast-growing businesses in the sector? So they have to compete with the large corporates who increasingly need people who are skilled up in this area. So there are two areas to focus on there.

Lord Lucas: What do the research councils do to contribute to this? Are they prepared to concentrate funding for a particular technology on the area where you are trying to develop expertise?

The Chairman: That is a good question. Do you want to come back to us on that? For example, it would be very interesting to know whether the research council has had any strategic view of developing AI in Edinburgh, or has it just happened because there happens to be somebody in Edinburgh who has been good at getting cash? Any insights on that would be very helpful. Thank you. We shall move on.

Q199 Earl of Courtown: We have touched on various areas but how can local businesses, particularly SMEs, outside of the tech industry, be brought on board? We have mentioned apprenticeships and there is also the role of catapult centres.

Angela Harrington: My view is the growth hubs are one of the ways of bringing local businesses more on board because the critical issue is: what is in it for a small business if it is not a tech business? I think there are a range of preconditions that would help. The first is access to superfast digital broadband. How do you stimulate demand for that? How do you ensure you have supply, in terms of areas of your city or your conurbation where that is not currently possible? There is quite a bit that a growth hub can do in terms of demonstrating the advantages of a well-connected business SME, whatever your business is; you can showcase your product better, you can engage with your customers better, you can use digital in terms of how you communicate beyond your immediate core. I suppose flexible working reduces your premises costs, whatever. There is probably a list of things for your average SME where digital has a contribution to make. I think that support to be able to access that, to skill up and use it in the most appropriate way should be integrated with other businesses.

Earl of Courtown: Of course, in these hubs you all have superfast broadband anyway, which is at the core of your ability to make the most out of it.

Angela Harrington: Yes.

Gary Warke: Certainly for us in the Humber region, it is a matter of having that digital sector hub. The vast majority of our businesses in Humber are SMEs, and to a certain extent they feel disconnected around advice about things like funding for apprenticeships and how they might get support. So digital was about meeting that need of SMEs. The hub is also trying to address the issue of gender balance between male and female—it is pretty much male dominated—and that stereotypical view of what working in the digital sector might be. It has a particular focus around narrowing the gap around gender participation as well as ensuring that SMEs are fully engaged in that.

Gerard Grech: It is about culture for me. Every company has its own culture. It has its own set of values and, in my opinion, it takes leadership from the top: the CEO or the managing director saying, "Digital is an area of growth for us and, therefore, everyone needs to participate in this growth". That is to do with skills training and identifying the right courses. There are courses online, some of them are free, some of them are very good, but then there are other courses that we are seeing in the evenings and at weekends, which managing directors and CEOs should encourage their employees to attend. They should pay for them and perhaps there should be some way of subsidising those courses. The digital economy is only 10% today but it is growing at quite a rate.

Earl of Courtown: You mentioned the gender imbalance, which is something that is of great concern. Do the three of you have any views of how we can improve the gender imbalance in this area?

Gary Warke: Certainly in terms of my day job as Chief Executive of Hull College Group, one of the largest FE colleges in the UK, we put a huge amount of work into what we do in terms of career choice and breaking down stereotypical views around that. That is all about positive role modelling, positive promotion and engagement. For us it is using successful alumni who have come through the college and come through the university sector originally. That is a key part of what we do as well.

It is very much like a lot of those particular types of profession; it is about continuing to look at how the promotion is effectively deployed on a local and regional basis. The use of impact, we find, is one of the key influences that helps drive that decision.

Angela Harrington: For me one of the things is, the earlier the better: support code clubs in schools; how can we ensure that digital computing is part of the primary curriculum; in terms of content, that it interests girls as well as boys; and in terms of route ways through and role models, what are the role models in the digital sector, and how do we make sure that they go out and visit schools? Also that young people can engage with them and, equally, that young people have access to those on a regular basis. For example, on International Women's Day last year, there was a Digital Teapot that was held to encourage women of all sorts to come in, see and experience what women digital leaders were doing in the city. That is just one very small example, but I think you have to deal with it fairly broadly from the ground up.

Gerard Grech: I would agree with my other panellists.

The Chairman: A work in progress, yes. Thank you.

Q200 Lord Janvrin: Coming back to the relationship between the development of hubs and developing skills—skills delivery, not just schools and university but the lifelong-learning, FE sector and so on—and whether this is seen as an intricate part of the hub development process, how do you connect up with the local education providers to provide not only the schools agenda but also the lifelong learning agenda?

The Chairman: And/or how it could be improved further.

Gary Warke: Certainly, within our region, the employment and skills board of the Humber LEP has oversight for ensuring that all the skills providers across the region are collaboratively working together. We have identified a number of key strategic priorities. As I said, first is renewables and second is digital, so within the digital strategy that partnership works together. We have established now the manifesto, which is around what educational opportunities are there within the region. We have a collaborative hub now about sharing good practice around developing online materials and resources, and so on.

The big issue is, and remains, about impartial advice and guidance. It is a real struggle in terms of the schools area. It is about being able to get into schools and describe the career pathway and choice, bearing in mind it is quite a competitive educational environment that we are currently in. That represents a barrier because that inhibits things around apprenticeship delivery and awareness of apprentice delivery. From an employer's point of view, that is something that we continue to work through.

With the business development part of the LEP, what we are working with there is to ensure that where there are specific new emerging products, like higher-level apprenticeships and digital, the partner colleges are developing that, in partnership with locals, to provide bespoke solutions for a number of companies in the region.

The Chairman: Is the funding nimble enough to be able to do that at the moment?

Gary Warke: It is.

The Chairman: You are the only person that has said that to us, I have to say.

Gary Warke: It is, in that each LEP will be different in the sense of what they have asked for through the growth deal. Our LEP had asked for innovation around how its funding could be used. For example, we have some waivers around how funding is used for setting up some particular specialist courses, and the 16-hour rule, and so on, has been waived in our region. So that allows the opportunity for some creativity and innovation in terms of how that delivery could work.

Having said that, there is always work to do, there is always clearly more on the careers advice and guidance. There will always be people trying to pull them together to make sure there will always be institutional interests that will be above a collaborative approach. We have North Bank and South Bank, so having to make sure that you have those two areas working together collectively always remains a significant challenge. But the appetite is there significantly. I think the region recognises now that the City of Culture 2017 for Hull is another catalyst that is driving the digital economy to work together.

Angela Harrington: The approach in Greater Manchester is very similar. Skills is the second biggest sector, and there is a lot of focus in terms of the skills needs to drive its growth. I would just add two points to what my colleague has said. The first is around using good labour market intelligence to drive what the skills delivery is in terms of this sector. We have certainly worked in the city with our local providers to look at where demand is and what supply currently looks like, and what we might need to do to invest in any kind of gaps. The second is what we are doing with schools and how we are getting an appreciation of digital from a very early age in schools. So what does the curriculum need to look like? Not because you will be able to create children and young people with the technology that is going to be in use in 2017, but to create the young people with the attributes and skills so that they can compete and contribute to the growth of the digital sector in the city. That is very much for us around how you create an immersive curriculum so that ordinary young people are digitally savvy, wherever they end up or whatever they end up doing. It has been mentioned a few times, how you have a really strong stem in terms of making sure that there are broad pathways for young people, there are proper technical skills and vocational pathways, and I agree, in terms of the careers information advice and guidance, how you make sure that is of good quality, it is up-to-date and the people delivering it are upskilled so that they understand what the opportunities are.

Then for us I think enterprise is the last strand. There are lots of people who work in the digital sector who are not on long-term employment contracts. How do you create people who can work in that sector, be fleet of foot and ensure that they can compete for and drive growth in the sector? That is all that I would like to add but I agree, in terms of the broad things, it is bringing it together and articulating how you get the collaboration to drive it in your city region.

Gerard Grech: We always run the risk of applying old norms to new industries and that is the biggest danger here. When talking to entrepreneurs and CEOs we find that in this specific industry of digital, in some instances there is less concern about qualifications and more concern about proof of what they have achieved. So that is putting an interesting point on this, which is: how do you ensure that people can prove what they are capable of without necessarily saying that they just have a qualification? You have companies saying, “Yes, great computer scientist from XYZ University, but they are just not hitting the ground running fast enough for me. We need to train them for at least another year before they are quite practical in their work and they can solidly solve a problem”. I am just repeating what I have heard directly from CEOs and entrepreneurs, “They have great lateral thinking; just practical skills, please”. Some universities are doing a great job of this and they understand this.

If you take Manchester Metropolitan University, they are putting together a digital hub—I do not know if it is launched yet but, if not, it is on its way—and that hub in itself, which is a physical space, is bringing together entrepreneurs, corporate companies, university lecturers all together in one place to be able to share ideas, so there is a level playing field in understanding where this industry is heading and how quickly it is moving. What we want to make sure of is that there is no time lag between what universities are producing in terms of graduates and what universities need. It is a classic issue, obviously. These physical spaces, like Manchester Metropolitan University is investing in, are a great way to do that.

As for the point about lifelong learning skills, I could not agree more, especially in this industry. Even myself, I have gone back to evening courses and weekend courses to keep up with the ever-changing landscape of skills that you need to stay ahead in this space, which is why we are seeing the emergence of private sector digital skills schools—like General Assembly, like Makers Academy—who are filling this gap. They are expensive courses, I have to submit. But General Assembly: within three months 95% of those who graduate, after doing their full-time 12-week course, find a job. So they are filling a need.

The Chairman: What level of education is needed to do that course? What sorts of people are going into that level?

Gerard Grech: The courses are very practical. They are taught by people who are working in that sector. I would argue they are much less academic and more practical. They are teaching you the terms and conditions of how Google Analytics has changed when it comes to digital. I will give you one example. In the area of digital marketing, they are quite up-to-date in how the terms and conditions have changed with the tools that you are using. That is how real time the course is, which is why they are able to find work quite quickly because they can hit the ground running.

The Chairman: Is that online?

Gerard Grech: No, these are physical courses that you attend.

The Chairman: Where are they?

Gerard Grech: General Assembly has a place in London and they have people coming from Germany, from all over Europe, to General Assembly here in London because of—

The Chairman: On one level what you are describing is brilliant but the danger feeds into our concern, which is: this is being delivered in London and we are in danger of doing more traditional courses in other parts of the country, putting lots of Government funding into it but it is not delivering what is needed.

Gerard Grech: We are trying quite hard to bring General Assembly up to Manchester, for example, but they need scale. They need to prove that there is a market from their point of view. At the same time, there is nothing preventing universities doing what they do. It is being able to recognise that need, working with local industry to figure out what kind of courses are going to be extremely useful and launching them. There should not be any time delay in that respect.

Q201 Lord Lucas: When Karen Price of e-skills saw us she said that what she would like to see is public, up-to-date, short courses that would be good enough for a returner or a career-changer to find out that they really could do this and good enough to show an employer that they would be worth training in it. Why do we not have them? What is getting in our way?

Gary Warke: Some of the funding will be a barrier for that, particularly for adult funding, which has been significantly reduced over the last number of years. That would be the main driver to that. Having said that, there are other ways in which that can be drawn down; perhaps through a self-funded role.

One of the other key areas—just picking up on the point of employers around that lifelong learning—in terms of being prepared for the world of work is around employability seal. One of the things we have done in the Humber, to pick up exactly the point that has been made about: we might be turning out a lot of graduates, we might be turning out a lot of people with A-levels and so on, but do they have skills to make that step into the job market? Employers bemoan the fact that team working, attitude to work, all that is missing. What we have developed in the Humber region is an employability passport, so that anyone who wants to finish their course in the institutions will have to meet a number of criteria that is around that transition, being prepared for work. That has been well received by employers—and is only awarded against a gold, silver, bronze list of criteria—and that is not just having qualifications, it is about the attitude for work as well. That is a key part of that development.

The Chairman: We are going to have to move on; we still have quite a lot of questions unfortunately.

Q202 Baroness Garden of Frognal: You all made mention of the importance of creativity. How can different regions be supported to foster creativity? Mr Warke, we read here your Humber is building a reputation for digital innovation and creativity. What are the elements that have helped that and are there things that you can recommend to other regions to put together a similar success with creativity?

Gary Warke: Yes, the key variables of the Humber have been that we have a huge amount of passion and commitment by some large and small and medium-sized organisations. So they have been the driving force behind pulling together and working together to set up this digital sector group. Within that creativity, for example, we host platform studios. Platform studios are an innovation hub for the region where young people can come in and set up their own businesses around creativity innovation. That has developed hugely. It is hosting one of the major gaming fairs in the world from that connectivity. So we have a platform and we now have a £15 million building set up called C4DI, which is about the creation for digital innovation. That is a new £15 million building in the City of Hull, which is going to accommodate all that innovation and creativity around the digital part of that.

The University of Hull and the colleges are now working collaboratively with all the investment joining that up. The digital manifesto maps all the curriculum pathways that exist from 14 and beyond to do that. We are also putting a proposal in at the moment to support the skills at school level, as we make that switch from ICT to computer at a compulsory point in school education. It is a matter of how that can be supported in all our schools in the region as well, to ensure that the skillset is there for the teachers in the schools and also by creating that awareness of moving right through.

The buzz within our region around the City of Culture, as I said earlier, is a catalyst and a huge amount of commitment and creativity. The thing that we do not have—and I am sure that creativity is probably in all the other LEPs—is a forum for drawing that in and sharing that. Perhaps that is something at a national level, how that can be facilitated through national LEP roles or through other partners because I am sure there is a great wealth there but we do not have an opportunity of sharing it.

Baroness Garden of Frognal: Presumably that work helps careers information advice and guidance as well, does it not, if you bringing employers into schools and so on?

Gary Warke: Yes, absolutely. There is still more to do in that area, significantly more. But, yes, that is very much the ambition that we want to do. In fact, Graham Stuart, chair of the

Education Select Committee, launched in Humber last Friday our first portal for creating impartial advice and guidance for all schools across the region, very much to address that issue about young people not getting access to the career pathways and choices.

Angela Harrington: The only thing to add to that is looking at how you bring the creativity and the digital together and how they can drive each other in a place. I think it has been mentioned already, the city has the advantages of having the BBC located in the city region. They are driving a lot of creativity around digital content and wider programming in the city. Also, it is the spinouts from the university. The universities in Manchester are clustered together along a corridor in a very small area within the city, and that spins out a lot of creativity and innovation. The question for us is how to capture even more of that to stay in the city, drive it further and link it with a wider infrastructure in terms of supporting the businesses but also wider infrastructure in terms of a culture and creative offer that makes the city a good place to visit, work in and grow a business in. That is the virtual cycle that we are striving to create.

Gerard Grech: Just to add two things—I do not want to repeat the great things that have been shared by the panel. First of all, obviously, we put a lot of focus in this country on numeracy and literacy but we do not do enough to perhaps put a focus on creativity at schools. I welcome this Coalition's introduction of coding in schools because I think coding is not about creating a nation of computer science programmers, far from it. What coding allows you to do is to be creative through logic. I think you have instant gratification for the work that you have put in, in terms of what you create. That is very positive.

We do not know what the problems of tomorrow are, so we need to create a workforce of problem solvers. To that point it would be good for local councils to say to themselves, "We do not know all the answers. We need to find a way of engaging the community to come up with some of these answers, especially in technology". Developers and people in technology, they love problems to solve and that is how they are creative. As long as they are recognised for it they are fine with it. I would like to see more local councils do hackathons. Hackathons are one day where you bring the tech community in to solve specific problems that have been articulated quite clearly by the local council. "We would like to have dustbin trucks run more efficiently. How do we do it? Here are the datasets that we will open up to you. Could anyone come up with some solutions to this problem?"

The Chairman: It explains how the application can work.

Gerard Grech: Absolutely, and having that confidence in political leadership to say, "We do not have all the answers but we are inviting you to be creative in how we solve these problems together". I think that builds trust, that builds collaboration and the level of understanding increases a substantial amount. One example of how we did this is we ran a flood hack when this country was experiencing some of the worst floods in this country for many years. We worked with Government Digital Services and the Environment Agency, and we ensured that some of those datasets were opened exclusively to the tech community and in one day we came up with 18 solutions, three of which went live within 48 hours. Clearly the understanding between the two groups increased substantially and that is always a positive sign because there is no gap. That, in itself, allows local communities to be creative. So when they see that their local council is ready to engage in that way you will be surprised by how willing the local tech community is ready to engage.

Q203 Lord Holmes of Richmond: Good afternoon. I would like to turn to inclusion and inequality. We know how the digital revolution has potential to increase inequalities and also, looking at the General Assembly course, is incredibly effective but it obviously costs quite a bit of dough. How do you think regional hubs and public funds can be better deployed to increase equality in this space?

Angela Harrington: I absolutely agree with your point. It is about to become even more important as people will only be able to access the universal credit online, so anybody who does not have online access is going to be seriously disadvantaged. There are a number of ways that local government or Government can improve digital inclusion. First is access, clearly. So how do we ensure that all of our population have access to high speed internet? We do that through libraries and we work with our partners such as registered providers in terms of housing access. What does our planning system do when somebody wishes to develop a new residential development in terms of stipulating or ensuring that broadband access is part of that development? The other area is around the skills development. For example, our adult education services include digital as part of employability skills. So where they are working with somebody who is out of work—and we know that people who are out of work and people who are older are those who are likely to be digitally excluded—digital skills are an integral part of the work that they do, so that people have at least a basic level of skills and understanding. So those are the two: it is access and the skills.

Gary Warke: Yes, I would agree with all of that. Social inclusion takes stock of a wider group in terms of the under-representation of women, BMEs and so on, and there is a real need to push that. At the Humber LEP we have now established women in digital and gaming to raise the profile, using some businesswomen across the region to work with schools and colleges to say, "This is a serious career pathway for women as well as men coming into this particular sector", as well as targeted work in BME. So I think it is a broader issue, not just about access to digital infrastructure and so on, although schools are doing a lot more with that now in terms of accessibility, but ensuring that under-representation is absolutely critically stressed.

Gerard Grech: Just two things, because I agree with the panellists. First is helping organisations like Code Club and Apps for Good who do a lot of work inside schools, and obviously students at school. They bring that information home and they will share it with parents. That in itself helps to increase the knowledge of these skills and what is happening in the digital economy. I have been a mentor for Apps for Good for over three years, working directly with people aged between nine and 15, and it is amazing how advanced their thinking is. They do not think about computers as PCs, like we do. They literally just think of computers as mobile phones. That, in itself, is quite amazing. It is quite staggering. I have lost my train of thought.

The Chairman: Do not worry, we will move on to the final question as we are overrunning.

Q204 Lord Lucas: What one thing would you ask us to recommend that would make a difference to the UK's competitiveness in digital skills? How would it be achieved and at what cost?

Gary Warke: For me, it would be around supporting creativity and enterprise among our graduates. I described earlier that we have platform studios, and that the platform studios in Humber are in an incubation area for graduates who are not quite ready for work but are buzzing with enthusiasm and ideas but they have nowhere to go with all of that. None of that is funded. So we have a qualification framework and an education system that is all about outcomes and qualifications but we do stifle creativity, we do not support it and we do not fund it. I talk about the schools sector and I talk about FE and beyond, so it is about how we can invest energy, commitment and resources into funding that business start-up and to enhance competitiveness is what I would really like to see.

Angela Harrington: We would like to further devolve the skills budget, so that we can build on the unique strengths, which I think have come out through our discussion here this morning, and make sure that we enhance digital skills in our cities and in our regions.

Gerard Grech: Hopefully I will not lose my train of thought this time around. If it is just one thing, I think more institutes that have a centre of excellence. The Alan Turing Institute is very welcome. That obviously will have excellence in computational science, but we need to recognise that, to be first in digital as a country, there are many digital capabilities that we need from machine learning to user experience and user design. If we were to have these institutes that are attracting the best and brightest talent from around the world, we will certainly be recognised for being at the forefront of digital innovation.

The Chairman: Thank you, that is really helpful. Thank you very much indeed, all of you.