



The Scottish Parliament  
Pàrlamaid na h-Alba

## Official Report

# ECONOMY, ENERGY AND TOURISM COMMITTEE

Wednesday 14 January 2015



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**ECONOMY, ENERGY AND TOURISM COMMITTEE**

**1<sup>st</sup> Meeting 2015, Session 4**

**CONVENER**

\*Murdo Fraser (Mid Scotland and Fife) (Con)

**DEPUTY CONVENER**

\*Dennis Robertson (Aberdeenshire West) (SNP)

**COMMITTEE MEMBERS**

Chic Brodie (South Scotland) (SNP)

\*Patrick Harvie (Glasgow) (Green)

\*Johann Lamont (Glasgow Pollok) (Lab)

\*Richard Lyle (Central Scotland) (SNP)

\*Gordon MacDonald (Edinburgh Pentlands) (SNP)

\*Lewis Macdonald (North East Scotland) (Lab)

Joan McAlpine (South Scotland) (SNP)

\*attended

**THE FOLLOWING ALSO PARTICIPATED:**

Brian Baglow (Scottish Games Network)

Bruce Crawford (Stirling) (SNP) (Committee Substitute)

Paul Durrant (Abertay University)

Colin MacDonald (Channel 4)

Chris van der Kuyl (4j Studios)

**CLERK TO THE COMMITTEE**

Douglas Wands

**LOCATION**

The James Clerk Maxwell Room (CR4)



## Scottish Parliament

### Economy, Energy and Tourism Committee

*Wednesday 14 January 2015*

*[The Convener opened the meeting at 10:02]*

### Interests

**The Convener (Murdo Fraser):** Good morning, ladies and gentlemen. I welcome all the members, our witnesses and those who are joining us in the public gallery to the first meeting in 2015 of the Economy, Energy and Tourism Committee. I remind everyone to turn off—or, at least, turn to silent—all mobile phones and other electronic devices so that they do not interfere with the sound equipment.

We have received apologies from Chic Brodie and Joan McAlpine, although Joan hopes that she might be able to join us a bit later. We are joined by Bruce Crawford, who is here as a substitute member. I welcome him.

We have a change in committee members, so I pay tribute to those who have left us. Richard Baker and Margaret McDougall were members of the committee for some time. We thank them for their contribution to the committee's work and wish them success in their new berths in the Parliament. I welcome two new members—Johann Lamont and Lewis Macdonald—and thank them for joining us.

Item 1 on the agenda is a declaration of interests by our new members and then by our substitute member. I invite them to indicate whether they have any relevant interests to declare.

**Johann Lamont (Glasgow Pollok) (Lab):** I do not have any.

**Lewis Macdonald (North East Scotland) (Lab):** I refer to my entry in the register of members' interests.

**Bruce Crawford (Stirling) (SNP) (Committee Substitute):** I have nothing relevant to declare.

## Decision on Taking Business in Private

10:04

**The Convener:** Under item 2, does the committee agree to take item 4 in private?

**Members indicated agreement.**

## Creative Industries (Economic Impact)

10:04

**The Convener:** Item 3 is evidence for our inquiry on the economic impact of the creative industries.

I place on record the committee's thanks to those who attended the event that we held last Wednesday evening. A number of committee members were there. It was a useful opportunity for us to learn from people in the sector about some of the challenges and issues that they face as well as an enjoyable opportunity to explore and experience some of the products that are on offer.

A range of themes came out of that event—some of which we can explore in this evidence session—including the diversity of the sector, the existing levels of support and the challenges that are being faced. Some of those themes have been highlighted in recent submissions to the committee.

I welcome our panel. Paul Durrant is the director of business development at Abertay University; Brian Baglow is the director of the Scottish Games Network; Colin MacDonald is the games commissioner for Channel 4; and Chris van der Kuyl is the chairman of 4j Studios. I thank you all for coming along.

We have about 90 minutes for this evidence session. Given that we have received quite a range of written submissions, I will not ask you to make opening statements. I am sure that we can pick up the points that you are keen to get across in your responses to the questions that we ask.

As there are four panellists, I ask members to direct their questions initially to one specific panellist instead of throwing open their questions, in which case all the panellists would want to have a say. If other panellists want to contribute to the discussion, they should catch my eye and I will bring them in as best I can. I exhort members to keep their questions as short and to the point as possible. If answers are similarly as short and to the point as possible, that will help us to cover the broad range of topics that we want to cover in the time that is available.

I will start with the issue of the lack of a national strategy or vision for the sector, which is covered in a number of the written submissions including Brian Baglow's submission. I raise the point because it is reflected in quite a lot of the evidence that we have received. Colin Anderson, the managing director of Denki, sets out in his submission his view that

"The primary issue affecting the Digital Media sector ... at the moment is the lack of a commonly held vision and clearly defined long-term strategy that all government agencies, departments, investors, businesses, etc., can use as the basis for aligning their endeavours."

He goes on to expand on that and on why he thinks that there is a need for a national digital network for Scotland. I think that you agree with that point, Brian, because it is in your submission, too. Can you explain why you think that that is the case and what needs to be done to address it? I will bring in the other panellists afterwards.

**Brian Baglow (Scottish Games Network):** Good morning, everyone. I echo the convener's thanks for your participation in last week's showcase. It was fantastic. All the games companies were incredibly happy that we saw so many members there.

The lack of a strategy in the digital sector is a widespread phenomenon not just in Scotland but across the United Kingdom. It is an incredibly rapidly evolving industry in which new devices, new gadgets, new routes to market and new business models are appearing all the time. That forces the industry to constantly change and run to keep up, but the support that is on offer is sometimes out of date by the time that it is implemented. Without any long-term strategy or any real vision for pulling all the creative industries together using digital media and interactive technology, we can only ever hope to be reactive and we certainly cannot plan our future in a really effective way.

Let us be honest: interactive media is a transformative technology as well as a type of content, and it is radically affecting all the industries that you will talk to, such as film, television, music and literature. There are also wider issues in sectors such as healthcare and education, and even in politics, sports and fitness. Those sectors are all affected by digital media. The games sector has the creativity and the technical prowess to drive all those things forward, but it is still treated very much as a silo and an insular content in its own right rather than the transformative technology that it could be.

**The Convener:** Thank you. I am keen to get the entire panel to comment briefly on this.

**Paul Durrant (Abertay University):** Strategies are important and, in the industry leadership group most closely associated with the sector, work is going on to develop and refresh a strategy that has been articulated in the past. All of that is important. However, a theme that I will return to a number of times is that it is more important that we create the right ecosystem in which everything can happen that needs to happen in terms of economic development in the games sector, and strategies alone cannot make that happen.

There is a lot of serendipity, and it is almost a case of making your own luck—that is what we need to do. There are fantastic opportunities. The agencies that support the sector are those that you might think would need to be connected into strategies and visions. However, there is too much of a lag in most of that work for it to have any real impact in what is a fast-moving sector.

I will not dwell on the issue now. Suffice it to say that, for me, the issue is much more about creating the right ecosystem, which involves doing a lot of small things rather than having a shiny strategy.

**The Convener:** Your point about serendipity is interesting because, at the event last Wednesday, some colleagues and I were struck by how diverse the sector is, how much is going on and how many companies there are. In many cases, whether a good product ends up being successful is a bit hit and miss—it depends on whether it is spotted and whether it gets the right level of marketing and attention.

**Colin MacDonald (Channel 4):** There could be more joining up of strategies across the various agencies and across the sector. Colin Anderson's idea of a national digital network is interesting. I think that that would help. However, my fear comes from the question of what is achievable. I am conscious that this is a fast-moving industry and that anything that we put in place today will be out of date next year or within a couple of years. I would be keen for people to focus on things that would adapt to the changing nature of things. That could be driven by a strategy, but not one that would take two years to put in place and would be out of date within a year and a half.

**Chris van der Kuyl (4j Studios):** The situation is quite interesting. As you take evidence from people in the creative industries, most of the messages that you will hear will involve challenges in the sector and the requirement for funding to be in some way competitive. However, the games sector does not need that. The top two games on last weekend's Sony PlayStation charts were both developed in Scotland. One was my studio's *Minecraft*, the console versions of which we develop in Dundee and East Linton, and the other was Rockstar's *Grand Theft Auto V*. I am sure that you will not have missed the fact that Rockstar is your new neighbour, as it has taken over the former headquarters of *The Scotsman*, behind the Scottish Parliament. There will be somewhere in the region of 1,000 developers in there—it will be the biggest single development studio that Scotland has ever seen and, I think, the biggest one in the UK by a long way. Those businesses are incredibly successful; the only thing that restricts their current and future success is access

to talent. That is a common thread that pervades every part of the industry.

There is a pretty good and accessible infrastructure regarding the current UK fiscal regime and the support that is available from the Scottish Government in the form of interventions around grants and so on. A strategy would definitely be helpful in addressing the need for some level of coherence and understanding across the agencies and in signposting those who are trying to access that infrastructure. However, the real issue—which, I am sure, we will address in more detail—is the need for a strategy on talent that covers both the creation of indigenous talent and the attraction and retention of non-indigenous, international talent. That is the single issue that we need to think about as broadly as possible.

**The Convener:** Our agenda this morning includes a discussion of skills, education and the provision of talent.

Before we leave the issue of the need for a strategy, I want to get a response from you on a follow-up question. If there is going to be a strategy, who will put that in place? Who will drive it?

10:15

**Chris van der Kuyl:** There has to be a reasonably broad conversation, but I think that the strategy must be owned by the industry. We have had success in the past. We had phenomenal engagement with Scottish Enterprise that began in the mid-1990s, and it supported the establishment of Scotland as a brand in the games industry. That was driven by Scottish Enterprise saying to the industry, "We don't know what to do to help you. What could we do?" We coalesced around E3—the electronic entertainment expo—which is the biggest annual trade show in the world, and, from that day to this, Scotland has had a positive presence at that trade show.

That has been part of Scotland's success since then, but the best thing that Scottish Enterprise did was get members of the industry together in a room—I think that the process started with an informal dinner at Dunblane Hydro. We managed to get together in the centre of Scotland to discuss the issues that we faced and find some common ground. Today, the industry is much bigger than it was 15 or 20 years ago but, even so, it is still small enough for us to be able to get the key players and the supporting agencies together in a room to come up with a coherent view of how we can develop a strategy.

**Brian Baglow:** The strategy must be industry driven. In many cases, the public sector bodies do not have the expertise in-house—Scottish Enterprise, Scottish Development International

and Highlands and Islands Enterprise, which do a lot of really good work, are the exceptions. The industry must drive the strategy in conjunction with the public sector, the Government and the Parliament.

**The Convener:** Do the other witnesses agree?

**Colin MacDonald:** In general, yes. The industry needs to feel that it owns the strategy and needs to drive much of the agenda. The only note of caution that I would sound is that we are still quite a young industry. As we are not a particularly mature industry, we are not great at figuring out what the long-term strategy should be. Nor are we great at engaging with Government, so I think that we would need to be shepherded by someone to ensure that what came out of the process could be implemented.

**Paul Durrant:** Instead of the industry contributing to some glossy strategic document or even an online thing that was updated regularly we need continued engagement with the industry to build an ecosystem that acts as a talent magnet. We should not embark on a long-term piece of work to create a strategy, as it would go out of date, but I certainly think that the industry should be at the heart of the process and should lead it.

**The Convener:** Dennis Robertson has some questions about funding.

**Dennis Robertson (Aberdeenshire West) (SNP):** Good morning, gentlemen. I will start with Paul Durrant. Professor White highlighted in his submission the issue of start-up funding. How difficult is it to access the appropriate funding? I am talking about funding to encourage entrepreneurship or to take forward an initial idea.

**Paul Durrant:** That can have its challenges, but talented teams with good projects will probably be able to find the necessary funding. The rationale for intervening in the sector with early-stage funding—a number of the submissions refer to the UK prototype fund, which I used to run—is more to do with contributing to the ecosystem and making sure that a significant volume of new intellectual property is being developed and that there are real-world projects that can employ talent and take on new graduates or encourage graduates to be entrepreneurial in their own right. The aim is to encourage people to exercise their leadership and entrepreneurial skills in real-world situations rather than through learning in the classroom. You might think that that is a rather odd justification for intervening in that way but, from running the prototype fund for three or four years, I learned that the biggest impact and the biggest value came from us funding that ecosystem.

In response to your question, I think that funding is a challenge, but the challenge is more about

providing funding to maintain the volume of new starts and new activities and to ensure that diverse talent comes together to do interesting stuff. That is the important thing. We should not see this just as a bunch of potential start-ups saying that they cannot get investment, which is the standard story that is heard.

**Dennis Robertson:** In that case, should there be some type of mentoring scheme? We have heard from previous witnesses that someone might have an idea but, even if it is one of the best ideas out there, that will not matter if they cannot manage the accountancy side or pull the business aspects together. In other words, they have the idea, but they do not have the business acumen to take it forward. Do we need to consider how to shepherd people through the process?

**Paul Durrant:** Absolutely. Despite everything that I have said about the case for public intervention, that can happen only if there is robust discipline in how the projects are managed and overseen and only if such an approach is connected to expertise. We are fortunate in Scotland to have people with expertise such as Chris van der Kuyl, Colin MacDonald, Dave Jones and Brian Baglow, who runs the Scottish Games Network, and a wealth of experience for new starts to tap into. Perhaps we need to formalise that and put some structure on or a wrapper around it because, if we are to use public funding to incentivise start-ups, such mentoring schemes will be important in providing discipline. Various submissions highlight good international examples of that kind of joined-up thinking.

**Chris van der Kuyl:** The games industry is not unique in its core requirements for basic entrepreneurial skills. There are people in particular sectors who have great talent but, as Dennis Robertson said, they do not really know how to build a business.

I should declare an interest as chairman of Entrepreneurial Scotland, which runs the Saltire Foundation. We are very fortunate in Scotland in having such organisations, which are all about peer mentoring and bringing people with high-growth ambition into great programmes. There is also the high-growth side of Scottish Enterprise and the fantastic incubator and accelerator culture that we now have—I am sure that you are well aware of Entrepreneurial Spark as well as TechCube here in Edinburgh.

We need such organisations, of which we are looking to have more across the country. They do not need to be entirely games-sector specific. After all, people who are trying to start digital media businesses in, say, tourism will face the same challenges in the basic running of a business as those who are trying to start games



companies will. I think that we are—and will continue to be—pretty well provided for.

**Brian Baglow:** The fact is that we are producing more and more new and original intellectual property. In 2013, Scotland produced 93 games, 86 of which were original, new IP, and in 2014, the figure was about 85 or 86, about 82 of which were original new IP. The issue is not the creation process; in some ways, content is cheap. What we lack are the skills for new companies to go out and operate sustainably.

I am entirely with Chris van der Kuyl: the amount of help and support out there from business gateway, the chambers of commerce, ESpark and all the other accelerators is exceptional, but we lack business sense. People get into the games industry because they want to make games; running a company is just a by-product. That is very much the same as in other creative industries, but the difference is that, in games, a really small team can produce something quite simply and cheaply, and wahey!—it is a games company. We need to take that forward, but problems arise with moving from the amateur or part-time team to a sustainable business. A mentoring scheme could help that situation tremendously.

**Dennis Robertson:** You mentioned business gateway. Are people aware of the support, including financial support, that is available? Are other agencies promoting that support? To return to finances, it would appear that the banks are reluctant to engage, as it is a high risk to do so.

**Brian Baglow:** It is a high risk. In any hit-driven creative sector, getting institutional investment of any kind can be difficult. I will defer to Chris van der Kuyl on that, as he has the expertise in those areas.

The key issue is that a growing number of new teams and companies are forming. We have four universities and about six colleges producing games-specific graduates. The number of new companies will only rise, because the opportunities for graduates are primarily entrepreneurial—Rockstar aside, we do not have the huge studios that we once did. The smart people will go out and find business gateway and talk to the local chamber of commerce.

The vast majority of people coming into games are from technical or artistic backgrounds. I have worked for only three people in the games sector who I would classify as entrepreneurial—people who are willing to pivot and change the company to make it sustainable and make money. We are missing such entrepreneurialism.

**Chris van der Kuyl:** There is no place for the normal clearing and lending banks to invest in small start-up games companies—that would be

the last thing that any of us in this economy would want. Investment in the sector is at the top end of risk. However, there are other sources of finance. Tag Games in Dundee recently secured one of the first crowd-lending loans from an Edinburgh-based organisation that is run by the technological entrepreneur Bill Dobbie. He was prepared to lend because he understands the sector and decided that the firm was risk worthy.

There is no shortage of finance. I mentioned the fiscal policies that prevail in the UK. The enterprise investment scheme allows individual business angels to invest, tax efficiently, in such companies, and they do that. Games tax relief for the bigger organisations is starting to make a difference as big inward investors look to get involved. Brian Baglow said that we will never see the big studios again. I do not think that that is true—I think that we will. In fact, we are seeing them already; they are just starting up in different ways. There are significant businesses of scale.

We should not get fixated on worrying too much about young companies and how they will come through. The ones that do that will find a way. Over a month, I probably end up mentoring five or six companies. They come through my door asking for advice on how to get going. I give them the same signposts as I give to everyone else. At least one of the companies will follow my advice; the others will be too busy building their next prototype.

I defer to my colleague Colin MacDonald on this issue but, if those guys are really talented, they will find relationships with publishing and commissioning organisations such as Channel 4 that will help them to find their way through the early stages. That has always been the traditional route. We took that route and we worked with publishers who guided and helped us and gave us commissions; we did not necessarily work on our own intellectual property to start with. As time went by and we gained more experience, expertise and capital, we were able to take more risks. Today, we have reached the stage where we do not have any external funding from publishers or anyone else and funding is purely self-generated.

**Colin MacDonald:** I will wind back to the question on business gateway. I have not dealt with it, but I hear that the advice is too generic. When people get to speak to Scottish Enterprise, they can speak to digital media experts who understand the sector, but the experience of those who have gone in at a more generic level has not been great.

A point that comes out from the discussion is about entrepreneurialism, which is probably the single thing that I would recommend anyone look at for the sector. We have a nation of amazingly talented, creative and technical people who create

ground-breaking new IP. The problem is that, as an industry and a nation, we are rubbish at exploiting that talent.

10:30

That is true for many of our big successes. For example, *Grand Theft Auto* was created in Dundee and is still made in Scotland, but most of the money goes to the publisher in the States. The game *Lemmings* was created here, as was *Minecraft*, which—although Scotland is doing very well out of it—is not intrinsically Scottish intellectual property.

We need to make our companies more entrepreneurial. They need to focus less on putting their heads down to create the next interesting thing and on getting the payroll in for the next month, and more on saying, “Never mind the payroll for next month—let’s think about that and how we make millions and billions.” The prototype fund was fantastic because it gave teams an opportunity to experiment at relatively low cost. Teams learned essential skills that they could use to build companies, take into new ventures or even take to other employers.

Initiatives such as the dare to be digital competition, which Abertay University runs, operate in the same way. During the summer, a bunch of students get real-life commercial experience and, at the end, they go shopping around the publishers. I commission one game every year from that process, which enables the teams to learn a little something about deal making, publishing and marketing. The industry has many opportunities, and a lot of game technology can be used in other industries.

A lot of investment is available, although not all of it is targeted as well as it could be. We need people with entrepreneurial ambitions who want to go after that investment and who duck and dive to find their way around the systems. At present, many of our talented games creators will take an opportunity if it lands on their lap, but they are more interested in creating something amazing than figuring out business plans and how to get investment. We need to inject more entrepreneurial spirit into our future creators.

**Paul Durrant:** I stress that, although the potential for securing funding for the right projects is vibrant, the idea of having prototype funding that exists not to address a finance gap but to pump-prime the ecosystem and all the talent projects is really important, as I said before.

**The Convener:** Does Patrick Harvie want to come in on funding or on another issue?

**Patrick Harvie (Glasgow) (Green):** My question relates to a few of the issues that were

raised in response to questions on funding and finance, but it is not specifically on that area.

**The Convener:** Okay—I will bring you in a bit later.

**Patrick Harvie:** That is fine.

**The Convener:** Next on my list is Johann Lamont.

**Johann Lamont:** I thank the witnesses for coming along. I was interested to hear what you said about strategy. Too often, we have perfect strategies that bear no relation to what is going on. A lot of effort goes into developing strategies across the board, but they do not relate at all to what is happening on the ground. I would have thought that that would be particularly challenging for you, given that you are almost inevitably always ahead of the rest of us in understanding the potential that exists. That is probably true more generally of the creative industries.

University and college courses were mentioned. I am interested in the links that exist between those courses and the industry and in how relevant they are. I am very interested in seeing companies grow, as that helps the Scottish economy. How do we ensure that there is a system for our young people who have talent to get into the new industries, rather than leaving that to chance or good fortune that depends on where they happen to be?

It is in your interest to access the talent, but it is in the interests of young people who might consider a career in the industry to have a route that enables them to get into it. We know what the routes are for other professions and jobs.

How do you make the courses that universities and colleges offer relevant to what you need? How do you provide a path that reaches into our communities to get young people doing the right things so that they get the fantastic opportunities that you are describing?

**Chris van der Kuyl:** That is a very relevant point of inquiry. Twenty years ago—around 1994 to 1995—we were all getting going in the industry. A few of us—me, David Jones and a guy called Russell Kay in Dundee—were all trying to build quite big studios on one another’s doorsteps, and we quickly realised that, if we did not find sources of talent to grow from, we would all just try to steal from one another, wages would go through the roof and we would be out of business pretty quickly.

We approached the University of Abertay Dundee, which wanted to do a virtual reality and virtual environments degree. We convinced the university to do something pretty radical, which was not to do that—something generic and non-specific—but to make the course about computer

games. It should not have been embarrassed by that. That was an industry of the future, and so it has become—it is now the world's biggest entertainment industry. In the past 15 to 20 years, Abertay has become the outstanding university in delivering games technology, design and management courses.

An ecosystem has been built, which goes into further education. It involves Dundee and Angus College, the University of the West of Scotland and a number of other institutions. All four of us around the table—Paul Durrant on a full-time basis, Colin MacDonald on Abertay University court, me as a visiting professor and Brian Baglow—have had deep interactions with that infrastructure for a long time. All of us have done phenomenally—I mean not just the companies but the whole sector—to build what we have managed to build.

The challenge for us today is that the universities are facing an ever-tightening belt. Abertay University has not had its troubles to seek in recent years. If we do not get behind what we kicked off and what has taken 15 or 20 years to get where it is, I am concerned about what will happen to the great work that has been done. I refer not least to the dare to be digital competition, which Colin MacDonald mentioned. As far as I am aware, that competition will no longer be run in the same way. It will no longer be about incubating new talent; it will be more about demonstrating what Scotland is doing at the moment. That is not investing in the future.

If we do not spend the vast majority of our interventions and time as an ecosystem worrying about the talent supply, we will not have an industry. Having 1,000 people across the road from here will not be sustainable. There is already a burgeoning sector in Scotland around all sorts of digital media, and I will happily mention that later. The next five to 10 years will be a phenomenal time for the related sectors in Scotland. What we all share in common is that we need talent.

An issue relates to science, technology, engineering and maths—the STEM subjects—at school. The Royal Society of Edinburgh did great work in getting computer science back on the agenda in a positive way. There are a lot of initiatives on coding that are leading our children to realise that such things can be a route forward for them.

Diversity is needed. For far too long, the subject has been seen as male dominated and geeky, but it is not. A broad range of skills is involved. As Colin MacDonald mentioned, taking products to market is not all about software development; it is about marketing, publishing, analytics and all the new digital economy roles.

I always say this, but one needs only to compare Seattle during the post-industrial, post-oil-crisis time in the 1970s with Seattle today. The Seattle area has one of the strongest digital economies, but its population is not much bigger than that of Scotland—it is about equivalent. That economy was created over 20 to 30 years by big businesses that wanted to focus on and build talent there. That is what we have to do. I recommend that the committee examines as strongly as possible how it can support us on that basis.

**Brian Baglow:** As I said earlier, Scotland is well provided for in higher education. We have four universities that offer games-specific courses. Abertay University is a world leader, as Chris van der Kuyl said, and is a pioneer in offering such courses. It has been joined by Edinburgh Napier University, Glasgow Caledonian University and the University of the West of Scotland.

Universities are making ties with industry and ensuring that courses are relevant in a number of ways. Six of Abertay's games courses are accredited by Creative Skillset, which is the UK-wide body for skills and training. The accreditation has an awful lot to do with ties with industry and ensuring that the content, the teaching and the learning outcomes are all relevant to what is happening in the industry.

The same body, Creative Skillset, offers the trainee finder programme, which allows graduates from those courses to join up to a massive UK-wide database and find companies that are looking for new talent. Creative Skillset funds 50 per cent of the costs of taking those trainees on.

As a route into the industry, that is exceptional. However, it is tied into the skills investment fund, which the Westminster Government recently announced is closing and which has not yet been renewed. That programme is closing for Scotland, Northern Ireland and Wales, which leaves us with an awful lot of trainees out there who will finish their training at the end of this financial year. It is hoped that they will move into industry and that the Scottish Government could look at providing a similar route into industry.

We have about 850 students at Abertay University, and a rough estimate would be 1,200 to 1,300 students going through the various universities and colleges. When they leave those institutions, they will either join some of the smaller studios that are out there or set up on their own. We could try to provide the routes into market to give the smaller studios—they are the vast majority of the games-related companies in Scotland—the opportunity to bring new people on board.

**Paul Durrant:** There is no doubt that the accreditation process and the high level of industry involvement in it have helped to bring on a strong portfolio of courses at Abertay University and elsewhere. That is a positive thing that we need to preserve.

However, there are a lot of other issues. When we have been involved in other projects, such as the prototype fund and the dare to be digital competition, there has not been an easy way to measure funding for universities that takes account of the beneficial impacts of those projects, which has made the position difficult. Notwithstanding the existence of Scotland's creative industries partnership, which is supposed to ensure that all the agencies including the Scottish Further and Higher Education Funding Council are joined up in thinking about the issue, I have never managed to persuade anyone that the impacts that we have created through things such as dare to be digital and the prototype fund should be measurable outputs in how funding comes into universities. In a sense, that is a disappointment.

I will mention a couple of things that relate to the wider questions. Notwithstanding the accreditation process, we must attract talent from the widest possible area. The games industry has all sorts of new audiences, and new markets are opening up. In Scotland, we have fabulous talent across all the art colleges and among those who are doing computer science degrees, and we need to attract some of those individuals into the sector. A lot needs to happen in the serendipitous ecosystem, which I will keep talking about, if we are to bring those people in.

That goes back to how we can encourage young people into the sector and get their sights set on it as a career choice. We need to do more to open up the whole sector—almost as a goldfish bowl—to schools so that people see real-world projects in action. We did a lot of that with dare to be digital when we launched the showcase event, dare protoplay, and encouraged thousands of families to come along. That was a first step, but a lot more can happen. We have another stage in the prototype fund, a lot of which is predicated on the condition that, to get any public funding, the projects must be transparent so that people can see entrepreneurial graduates in action, developing creative content in real-world projects. We need to get the maximum bang for our buck by creating that goldfish-bowl effect.

**Johann Lamont:** You have mentioned universities, but do you think that there is a particular role for colleges? Colleges are clearly under massive financial pressure, but could there be pre-courses to get people to a certain point? It is one thing for some bright young thing to think, "I could work in the games industry", but a young

woman or somebody from a particular community might not think about that. Are conversations taking place, particularly with the colleges, about the skills that someone might need before they can think about doing a degree, which would lead people to work in the industry? Someone who wants to do an engineering degree, for example, can be offered training at college that will get them to the right place to do that. Has there been any discussion of that in the games sector?

10:45

**Brian Baglow:** I will jump in.

As I have said, a growing number of colleges are offering higher national certificates and higher national diplomas in game development. From my conversations with the colleges, I know that they are incredibly popular choices for young people.

The reality in the wider world is that the tools and technologies to make games have never been more available and accessible. There are tools out there, many of which were created in Scotland, that are free to download and use at home and which allow people to build games that are just as good as the ones that they see on their Apple smartphone or tablet. People can take things through that process and publish them.

The issue is not how to attract more people into games—we are already attracting a lot of people into them—but how to ensure that colleges receive the same support as universities and that they have the same strong ties with industry. That approach has to be industry driven, too, to ensure that people come out with the right skills and mindset. It is about entrepreneurialism, not just sitting in a small room for five years making stuff.

As Paul Durrant has said, we need to take a step back, start to look at high schools, encourage far more diversity and ensure that people are aware that the games sector can be a proper grown-up industry. I have spent the past 20 years trying to persuade my parents that I have a real job.

**The Convener:** We have exactly the same problem. [*Laughter.*]

**Brian Baglow:** It has not worked to date, but I have high hopes.

We need to show that games are not just about hard-core coding and hard-core art and animation. We need the analytics, the data analysts and the computer scientists. We need all those incredibly diverse and creative roles in the sector, and that is not being communicated effectively. The games sector in Scotland is still a little bit insular and isolated and something of a black hole.

**Paul Durrant:** I know that Chris van der Kuyl wants to say something, but on the point about schools, the curriculum for excellence was designed to build in a lot of opportunities for interdisciplinary work. Games provide fantastic opportunities for that, but teachers do not have the time or resources to really capitalise on a lot of real-world projects, bring them into the classroom and fill interdisciplinary slots that exist in the design but currently do not seem to be taken up very much in the classroom.

**Chris van der Kuyl:** As with any attractive industry or job, if someone at school has no point of reference and says, “How would we ever get into that industry?”, they will probably never get into it, as they will have no idea how to get through to it.

The visibility of the games industry in Scotland seems to be changing. People constantly come through our doors and say, “I live for Minecraft, but I didn’t realise it was made in Scotland. Can we come and see?” Obviously, we have to restrict the number of people who can access to our studio, but we are always encouraging. I should also say that we have been supporting a project by Derek Robertson at the University of Dundee to take Minecraft into schools. He is using Minecraft as a teaching tool that is embedded in the curriculum for excellence.

Some of us have been in the industry for 20 years or so and are getting a bit of grey hair, and it is interesting that we are seeing people who have taken unusual career paths. They might have come, completely unqualified, to the slightly larger studios to test games or worked on small bits of levels of games. Twenty years later, some of those guys now have big global careers running studios and heading up some of the biggest game franchises in the world.

In the past few years, the new phenomenon of video bloggers has appeared—I am sure that members will be aware of that in other contexts. People are starting to build careers out of commenting on games; in fact, they are building huge businesses out of that. A 16-year-old guy in Irvine, who goes under the moniker of L for Leeeeeee x, is one of the most popular Minecraft YouTube characters on the planet. Those guys are building serious careers out of that sort of thing and have not had to go along traditional paths. Moreover, some courses, such as media studies and core video production courses, teach people transferable skills and they become a core part of the games industry. As a result, the industry is ever evolving.

Going back to the point about strategy, I do not think that we cannot stamp out one course that will do the games industry for the next 20 years. We need a real, core understanding that digital media

and the associated skills are quite broad and generic, but that those skills are well worth having now, because some of the biggest and best opportunities that anyone will see over the next 20 years will be in those industries.

**The Convener:** Two members have follow-up questions. Bruce Crawford will be first, to be followed by Richard Lyle.

**Bruce Crawford:** Thank you for coming along today, gentlemen—this has been a fascinating discussion. I have a specific question for Brian Baglow about his written submission, after which I will broaden things out. First, though, I should say that I am in a slightly different chronological position from you, and it is my kids rather than my parents who do not believe that I have a real job.

I find it fascinating that, according to Mr Baglow’s submission, we have more graduates than the industry can accommodate but we still have skills gaps. We can sit that alongside the point made by Daniel Livingstone from Glasgow School of Art and Brian McDonald from Glasgow Caledonian University that, although we have all these graduates, a lot of them leave the Scottish scene almost immediately and go elsewhere. That point relates to the discussion that you and Chris van der Kuyl were having about critical mass, capacity and scale. Is Rockstar Games just the beginning with regard to the scale of what is going to happen across the road from the Parliament? Where is the industry going to go? Will we be able to retain a lot more talent in the future to help contribute to the Scottish economy? After all, if we do not, others will get the benefit.

**Brian Baglow:** Boy, that is a big question! Okay—I will go first.

The nature of the industry has changed. As Chris van der Kuyl stated earlier, in the early days when we were all creating games for games-specific devices—home consoles and the like—we needed a large team and a lot of up-front investment. As a result of that, the studios were quite big, with 50 to 100 or sometimes 250 people. However, that situation has changed, and the industry has evolved to the point that the majority of games-creation companies or studios have fewer than 10 people. The reason for that is that the majority of games are now being created for smartphones and tablets. As a result, we do not need 150 people and £X million up front, because we can now create a game for an Apple iPhone or Android tablet with two guys, a good idea and some spare time.

However, although the nature of the industry has changed quite dramatically, that does not mean that companies cannot scale up. Across the sector in Scotland, a number of studios have grown from very humble beginnings to having 30,

40 or 50 or more people. However, the weighting now tends to be towards smaller studios, which need more multidisciplinary people. For example, someone in a really small studio could be the lead programmer but might also end up having to do the marketing, the payroll or business development. In the small studios, multiple roles have to be combined in individual people.

Now that there are fewer larger studios and now that they are further apart from one another, we have a problem with some senior staff. There are people working with companies in Scotland who will simply leave the country if their company has problems or closes its doors, because very few companies here can accommodate them. That is an issue, but it could be solved if the studios grew and became more sustainable. We as an industry really need to focus on that and try to ensure that we produce sustainable businesses that have the scalability to compete in a global market.

**Chris van der Kuyl:** My view is slightly different from Brian's, but I agree with a lot of what he has said. Small studios are quite prolific because they are so easy to start. It is so easy for people to say, "Right, we've got enough money to last six months and that's enough for us to get a game going." It is inevitable that most of those guys are not going to succeed. They will appear in a blaze of glory and put their game on the market, but it will not sell and they will find something else. That is fine, because some of those guys will succeed and some amazing things will come out of that work. That is not a replacement strand to the industry; it is an additional strand that did not exist previously. It is not that people have stopped making big, high-budget games for consoles or personal computers, but that a new market for games has appeared as a result of phones and similar devices that did not exist seven or eight years ago.

What has started to happen with the bigger console games is that even more money is going into them; for example, £50 million and £100 million are the numbers being touted around for the budget that Rockstar would spend. Economically, that has a huge impact, because whether or not New York is gaining the lion's share of the revenue when the game goes on sale, enormous salaries, bonuses and taxes are being paid in country right now by those businesses, and they are being constrained by talent.

On your point about the dichotomy between the oversupply of graduates and the fact that people are screaming for talent, there is clearly a bit of a mismatch in that respect. Undergraduates who come into the industry when they graduate are still really trainees, and even if they come in to do a really skilled, high-end job, it will be a number of years before they make a contribution as a core

part of a bigger studio. As with any big company with a graduate training scheme, a bigger studio will have a training programme that it will take a graduate a year or two to complete. If you want to grow quickly and instantly, you actually want people above graduate level. To that extent, the undergraduate population is reasonably well balanced, but the industry just needs to grow a bit more.

Right now, we are going through an interesting inflection point in Scotland's digital history that I describe as having a couple of black swans swimming around. You might be familiar with a book that was quite popular a few years ago which said that black swans were thought not to exist until someone found one in the back end of Australia. The perceived wisdom was that such a thing could not exist, but then it did and suddenly there was a whole flock of them. That happens a lot in the digital industry.

In Scotland at the moment, we have two amazing digital media businesses that are fundamentally based in Edinburgh. FanDuel and Skyscanner are both backed by venture capital, principally from Scotland and the United States of America—from silicon valley, if you will. Both are already incredibly successful and are highly likely either to go for an initial public offering of billions of dollars or to sell for billions of dollars. Right now, those companies are employing every talented digital media graduate and person whom they can find or bring to Scotland, while at the same time they are expanding outside Scotland. They are having a displacement effect on some of the games companies, because people are moving to them. However, that is not a problem; it is just a challenge that we need to address, because when the black swans become apparent to everyone, Scotland will become an attractant for international capital and digital talent like we have never seen before.

Working out how to take advantage of that is definitely a national question. How can we ensure that, in 10 years' time, we do not look back and say, "We had those two companies, but then a couple of other things happened and we're still where we were"? How do we use them as our inflection point to become the Seattle of Europe? I believe that those businesses will be significant, as will the businesses that spin out of them. We also have another cluster of digital games businesses, from the small ones all the way to the larger ones, that are screaming for that talent base. The growth will come from there, but the other big question is about how we attract and retain that talent from abroad.

In my studio, 60 or 70 per cent of the staff are not indigenous Scots and did not train or do their first university degree here, although some of

them did postgraduate degrees here. Most came to work in the industry, either directly for us or for others before moving to us. The classic thing that happens in, say, the finance sector is that high-quality graduates come out of Scotland and go to London where there is a critical mass of companies. If they do not work at Morgan Stanley, they can jump to Goldman Sachs or Société Générale. We need the same thinking here, because if you want to do that in the games industry, California is the hotbed of activity and there are thousands of companies to choose from over there. Canada has a few really big clusters in the same way, and Scotland is right on the cusp of having the same thing.

I am not suggesting that I can give you an answer today, but the question is: how can we make Scotland a more attractive environment for those very mobile and generally young, though not necessarily all graduate-age, dynamic individuals who can go anywhere? We want them to choose Scotland. That is a key question that the whole nation can help us answer.

**Bruce Crawford:** Is it down to the games industry itself to make that happen, or are there Government interventions that can enable that transformation and get us to the place that you have envisaged?

**Chris van der Kuyl:** The Government can intervene in three or four key areas. We are doing quite well on fiscal support in a number of ways, with regard to both systemic taxation and the laser intervention of grants and things like that. Strategy and signposting could help us perform a bit better, but we are doing pretty well.

11:00

The other three areas are as follows. First, please continue to fund the areas of education that support us as strongly as possible and in the widest possible way. Secondly, immigration policy is crucial. We must be able to get people with high-quality talent and high-quality skills instantly, when we need them. Finally, retention is a quality of life issue; it is about having a healthier, fairer and more wonderful Scotland to be part of. Look at the vision that the Government and the city council have shown in Dundee with the waterfront regeneration, the V&A and the partnerships between the universities. That is what will do it, and we need to realise that vision. Dundee is already the UK leader in life sciences—and we are not far off being the UK leader in the industry that we are discussing—and that kind of environmental regeneration can make a place the place to be.

Of course, this is not just about Dundee, but about the whole of Scotland. We can do it. Clearly,

outwith the industry, Government has a massive role to play.

**Bruce Crawford:** So we need exciting jobs and an exciting country to attract the people whom we need. Thank you.

**The Convener:** We are two thirds of the way through our time and I am halfway through my list of questions. I know that you all have a lot to say, and it is all very interesting, but it would be helpful if you could tighten up your responses a little.

**Richard Lyle (Central Scotland) (SNP):** I will try to be brief. I am really enjoying this discussion, gentlemen. I remember the first time that I went into a games shop with my son. He convinced me what game was best for me and what to buy. It is an exciting, money-making industry and something that we really need to get into.

One of the submissions says that the

“Scottish games industry needs to focus on translating the existing creativity and critical acclaim into solid commercial success”.

We have all these excellent people—I would not suggest that Chris van der Kuyl is a geek, as he said earlier—who are developing excellent games, but some companies might not have the commercial ability to capitalise on that.

The same submission says:

“To retain talent in Scotland ... the simple answer is to help teams find sustainable, commercial success”,

and a comment was made about locating companies in the city centre rather than out in innovation parks.

The submission asked whether we should create a national company for play—Chris van der Kuyl talked about that. The funding and the creativity might be there, but do we need something to drive it on? Chris van der Kuyl said that the industry can drive it on, but do we need a national company for play, similar to the national theatre et cetera?

**Brian Baglow:** If you want a minute to think about it, I know who made that submission.

**Richard Lyle:** I did not want to name the person, but I will.

**Brian Baglow:** That is quite all right. I did my homework—I read them all.

**Richard Lyle:** It was David Thomson, director of Ludotronics.

**Brian Baglow:** Ludometrics.

**Richard Lyle:** Ludometrics—sorry.

**Brian Baglow:** The games sector has reached the position that it is in primarily through commercial success, or lack thereof. It is

inherently risky to create new intellectual property—we do not know whether something is going to work. If we look at what the major publishers are funding in the big console market, we see that it is all about minimising risk, which is why we have sequels, franchises and FIFA 15. Those are games that the publishers know are going to sell, so they do not mind ploughing millions of dollars of investment into them.

Several companies in Scotland have had an ongoing discussion about how to innovate and explore, and how to we work with theatre companies, film, television, authors and musicians to find new and interesting ways of using interactivity and using the devices that are out there. Smartphones are voice enabled, have high definition video both ways and are location aware and motion sensitive. We can collect coins, rescue princesses and blow stuff up—we are good at that. However, the issue is how we can move things forward and innovate in not just a playful way but a way that can draw together all the other creative industries. A growing number of people suspect that we could do that by having a centre for play or a company that focuses on innovation and using digital media and interactivity in new ways.

There are a number of examples around the world. Canada has several, and—oddly enough—there are some in Seattle. The idea is that there is a big building with loads of free wi-fi where people can come along, sit down and join in, and there is a small amount of funding there to let people explore and experiment. It is out of those ideas and that innovation that we can find commercial success and the scalability and sustainability to go out and make something that is totally awesome.

**Chris van der Kuyl:** That idea chimes with what Paul Durrant was saying about the prototype fund. It involves tiny little lumps of risk money that people can use to try stuff out and experiment and innovate. I believe that that can be done within an academic environment, if it is funded properly; it can be done independently. That is fine, and I would not argue against that. We already do well with regard to co-funding alongside private funding. The Scottish Investment Bank has a co-investment policy that has been very successful. Outplay Entertainment, which is funded by Pentech Ventures in Edinburgh, accessed Scottish Government investment through that co-investment route.

You do not want to suggest that we can suddenly magically create an organisation that will be able to pick hits, because we absolutely cannot do that. The biggest companies in the world find it difficult to do that. How could we possibly dream that we would be able to set up something that would enable us to say, “There are the three guys in Glenrothes who will be able to do it—let’s back

them”? Those guys would just have to find their own way to market, but if there is a way in which they could try stuff out in a good environment, that would be helpful. It would be good to put an incubator structure around them so that they are not just left to sit in a corner and try stuff but instead have people around them who can peer mentor them and say, “Hey, listen, you might be having fun with that, but where’s the funding going to come from in three months? You’d better get out talking to the funders now. You’d better build a prototype that people can play. Who do you know? Nobody? I can introduce you to someone.” The kind of model that involves getting like-minded people together like that is brilliant.

The other important thing is that such an environment would be a wonderful place for indigenous publishing organisations to start. Companies such as Outplay Entertainment and Tag Games are trying to create that kind of model at the moment. We have generated a lot of capital from the industry and we want to find projects to invest in so that we can expand our own business, but we want to do that only at the right time and in the right way. There is no magic wand that will mean that we will suddenly have 1,000 new games companies funded. The kind of things that we are talking about will fund one or two companies a year. If you look at the big publishers, you can see that the industry is akin to the film, television and music industries in that, although there is a lot of activity going on, there are 1,000 times more people trying to break in than are being funded. It is not that the situation is unhealthy. What we are asking is, how can we help ourselves to hyper-perform, relative to others out there?

By the way, this is not a bleating session. As I said right at the start, the sector is doing really well. In the past 15 or 20 years, we have grown one of the world’s most recognised clusters for games development, with at least two of the biggest entertainment franchises in the world—I am not talking only about games—being developed in Scotland. That is a brilliant springboard for future success.

**Gordon MacDonald (Edinburgh Pentlands) (SNP):** We have touched on the support that you get from Scottish Enterprise’s business gateway and so on. What type of business support is available? How effective is it? More important, if we are going to continue to grow the sector, where are the gaps that need to be plugged in order for that growth to continue?

**Colin MacDonald:** From my point of view, there is a fairly broad range of support available. Scottish Enterprise has a number of grants, some people have won business from TSB and there



has been some games involvement with Creative Scotland.

There are gaps—things could be more joined up—but, for me, the issue comes back to the fact that the people who are accessing the funding sources are the entrepreneurial types. I do not mean this in a bad way, but they are not necessarily the most deserving or the most creative, although sometimes they are. I think that we need to open up to everyone else the sources that are available. Some of that involves signposting, but mostly it is about instilling that spirit in our new creators and new teams who are coming through.

Things such as the prototype fund and the dare to be digital competition foster an environment in which people think on their feet and figure out how they can get funding. They have already built something, so rather than think about the next technical challenge, they need to think about how they can exploit or sweat their asset. There are gaps, but that is not the main problem. I think that we can do more to foster entrepreneurialism so that people can go and find the funding that is out there.

**Paul Durrant:** I agree that it is much better to create a real-world environment that has small amounts of funding that allow real projects to happen. As has been said, it is clearly not about picking winners, but the greater the volume of original intellectual property being developed, the higher the chances of something bubbling up to the surface and being spectacularly successful. While all that is happening, there is a huge amount of real-world learning by all those who are engaged, including by graduates who are not oven ready, as we heard, but who become oven ready by the time they have worked through their own little start-up, which might fail. They might just get a single title out that does not do anything, but that means that they can take a huge amount of additional experience to an interview with a larger company, and they will probably get hired because they will be able to talk through that story.

On the point about whether we need to establish some entity or institution, I do not think that we need to; it is much more about creating something unbounded. As soon as we start drawing boundaries and creating metrics et cetera, we have a problem. We need something that is much more fluid so that we can capitalise on the things that none of us here knows about but which will be spectacular successes in the sector in the years to come.

**Brian Baglow:** The public sector in Scotland suffers from an embarrassment of riches, because we have Scottish Enterprise, Scottish Development International, Highlands and Islands Enterprise, TalentScotland, Interactive Scotland

and, in relation to the previous point, Arts & Business Scotland, which I came across recently. At my last count, there were between 25 and 30 public and private sector organisations actively trying to help the games sector in some way. Just finding out what they do and how they can help is a full-time job.

Colin MacDonald was right that a large part of the issue is about signposting, but it is also about having the visibility and transparency that will allow the people who need it to find information about the differences between Scottish Enterprise, SDI, Skills Development Scotland and Creative Scotland—we have not touched on the latter yet—which can be a significant stumbling block when it comes to where they go next. We need to improve the information that is available and the visibility of all the organisations to which I referred.

**Gordon MacDonald:** Part of the funding would come from international sales. We have already talked about the fantastic successes of Minecraft, Lemmings and Grand Theft Auto V. What kind of support do you receive to help with overseas sales? Is it the correct kind of support?

In its submission, Codeplay Software stated:

“We have found the support provided by Scottish Development International ... in particular to be of utmost importance and value.”

However, the director of Ludometrics stated in his submission that

“SDI are responsible for helping games companies attend industry conferences such as the Game Developers Conference, but have no flexibility for helping companies attend consumer focused events.”

Do the likes of SDI provide the right kind of support?

11:15

**Chris van der Kuyl:** Earlier, I made a point about Scottish Enterprise’s initial foray into supporting us, which was all around E3 and helping Scotland to become a coherent brand. It should not be overlooked what a seminal moment for the Scottish games industry that was and how different it was from what happened in other countries. No other countries banded together to pay for space at a big international trade show. Scotland’s stand was right beside those of Sony and Microsoft. Canada and colleagues in the rest of the UK quickly started screaming that that was unfair, but it was a brilliant initiative and Scotland really stole a march on people and benefited greatly.

That continued support is really important. It is worth making sure that we dovetail properly with UK Trade & Investment, because UKTI is doing a pretty good job on similar things, and companies

need support to go to big international trade shows, and not just to attend—because anyone can do that—but to attend with a brand behind them. If you are two guys in a shed in Dundee and you turn up under the brand Scotland banner and are introduced to the right people, you have credibility. In that respect, UKTI does a phenomenal job.

Interestingly, when it comes to export markets, we do not have the same challenges as those that the food and drink and engineering sectors have. When it comes to exporting our product, we press a button and it appears wherever it needs to appear. The global distribution networks that Apple, Sony and Microsoft have are actually relatively easy to access. I would not say that they are easy to become the number 1 in, but they are relatively easy to access. Only a small number of conversations need to be had to achieve that, and peers in the industry will be a far better source of contemporary contacts in those companies than SDI or any other such body ever could be.

I think that the submission that you mentioned might have been alluding to the fact that, in such a fast-moving industry, what was a market last year for the guys who make games for games consoles is completely irrelevant for people who are trying to make a game on a phone aimed at 18 to 25-year-old females. They want to be at some glamour fashion show, so they need support to get into that.

There probably is a case for saying that digital media games guys may pop up in unusual places, and the one thing that you need to do if you are going to be successful in this industry is to be global from day 1. People cannot think of Scotland or the UK as the primary market; they have to think about an international market from the minute they get up. Right now, for mobile and smartphone games, Asia and the Asian subcontinent are the growth market, and China is opening up at an incredibly rapid rate, as we all know. That is where cultural specialists in an organisation such as SDI could really help us, because very few people in the games industry will have the right networks into those emerging markets.

**Lewis Macdonald:** That is interesting stuff and it takes us back to the convener's original questions about strategy and direction. Everyone who answered Murdo Fraser's question said that the strategy needs to belong to the industry, which is sensible. I think that Colin MacDonald used the term "shepherding"; he said that although the industry should own the strategy, there must be someone there who can shepherd the industry and oversee how the strategy works.

Some of the evidence suggests—I think that this is a Nesta finding—that Scotland does relatively

well on the high-tech side and less well on the creative side in competition with other peers. In the public sector landscape that you have described, there are a lot of players and it is not entirely clear that there is a lead player. Should there be? If so, who should it be? Is Creative Scotland engaged in the most effective way? What about something like a national digital network, which is suggested in one submission? Is there a need for the different agencies that are already engaged to pool their knowledge in a new way in order to provide the kind of shepherding function that Colin MacDonald described?

**Brian Baglow:** One of the biggest issues in the sector in Scotland at the moment is a lack of clarity about what the different organisations have to offer. Creative Scotland does not have any legacy of working with the games industry. The Scottish Arts Council certainly did not and I had only just started talking to Scottish Screen when the merger process took place.

Creative Scotland has funded a small number of projects and award categories in the past, but it does not have any in-house experience with interactive media or any real focus on that. Its 10-year strategy, which was released towards the end of last year, mentioned that the organisation was all about digital and innovation, but I know from having picked the strategy apart that there is very little in it that we can drill down into that allows us to say that Creative Scotland gets the whole idea of interactive media as transformative technology that can help all the other areas of the creative industries.

Members will hear from people in the film sector. Let them come and talk to us about distribution. As Chris van der Kuyl says, we can put things on smartphones and other devices around the world at the push of a button. Interactivity can offer a lot of solutions. Currently, we do not have any one agency that encompasses that sort of knowledge or has that kind of vision. Something like a national digital agency could potentially at least start hooking together all the different organisations and putting together a vision and a rapidly evolving and iterative strategy for the country. That sounds to me to be a good plan.

**Paul Durrant:** I think that Colin Anderson made a point about the national digital network. We must be careful not to confuse that with a digital agency. In my serendipitous model, the biggest benefit from having something like that and capitalising on what was possibly a missed opportunity around the time of the Scottish Broadcasting Commission report, which suggested that, is that at least a commissioning pool and home market that could feed into the wealth of small teams and original IP generation would be created. For me, that is one

of the biggest benefits of a national digital network and Scotland perhaps becoming a leader in having something like that.

**Chris van der Kuyl:** The one thing that I would counsel against is creating an agency just for the sake of creating one. Scottish Enterprise has been radically restructured over the past few years, but if we look inside it, we still find a core of individuals who really understand and know the sector and are capable of leadership and the facilitation of leadership—the shepherding role that Colin MacDonald talked about—if they are given the right mandate. There is an organisation with individuals in it and the right structure. They have probably been restructured out of existence in terms of being recognisable as that, but if they were modestly supported, I am sure that we could find the right structure to put round them to help us to nail the strategy down.

The question is how we connect up all the multiple agencies. I would not want to take Janet Archer at Creative Scotland away from the core mission in which she is deeply involved for her to start worrying too much about the expansion of and industrial challenges for the games industry. In my view, that is not Creative Scotland's role. However, should Creative Scotland as an arts organisation engage with that whole new world, as Brian Baglow has suggested—of course, it is already doing so—what more could we do? That is with almost a pure art form, which I always see as the initial ideas that become the commercial successes of the future. One should not ignore that.

All the organisations have a part to play, but we probably have an agency that can sit right at the centre of that and coalesce, if we talk to the right people.

**Patrick Harvie:** We have usefully explored ways in which the industry has changed, ways in which it might change and the pace at which it is changing. I am left with a slight concern that, even if we get the package of business support services and engagement strategies right, for example, it might be clear that it is completely wrong in a year's time because of the pace at which the industry is changing.

I would like to talk about the scale and structure of the industry. On a purely factual point, we have two reports in front of us, both of which are from September 2014. Nesta's report says that 5 per cent of the United Kingdom's games companies are located in Scotland, and TIGA's report says that we have nearly 12 per cent of them. Is that just because people cannot pin things down and the industry is changing so rapidly that no one is quite sure of the figure, or is something else going on?

**Paul Durrant:** My understanding is that the Nesta report was a first attempt at a sort of broader classification of games companies, whereas TIGA is focused on its membership, with perhaps a more conventional description of games companies. That might account for the slight discrepancy.

**Patrick Harvie:** So Nesta cast the net wider, and it found more down south and less in Scotland.

**Paul Durrant:** I think that Nesta is trying to address the discrepancy with standard industrial classification codes and the way that companies register and declare stats.

**Brian Baglow:** The games industry UK wide, and specifically in Scotland, has suffered from a lack of hard data for some time. The last official report in Scotland, which was the 2012 economic impact survey that was commissioned by Creative Scotland and Scottish Enterprise, found that there were fewer than 200 people in the games industry and it was worth zero. I had issues with that, which indirectly led to me being here today.

We still do not have any official numbers. The SIC code is the normal route that people use, but there is a tremendous variety of companies out there and the diversity is increasing daily. The Nesta report used data scraping from the internet, so I tend to think that it is slightly more accurate.

**Patrick Harvie:** I want to explore that diversity and the structure of the industry, as opposed to the scale. The written submission from Ludometrics, which was mentioned earlier, suggests that there are two categories of company that might have existed for quite a long time. One is the sort of company that works for hire. It might do a bit of animation for games one month and adverts the next. It might scale up and scale down, but that is basically what it does. The other category is the sort of company that is looking for growth. It wants to be the next big thing and it might have some venture capital funding.

The submission argues that there is a third category, which should be understood more like a band in the music industry. Some of those people might harbour the ambition that, one day, they will create the next big thing—the next GTA or Minecraft—and take over the office that used to be occupied by something called a newspaper. Some of them, though, are the people who have maybe been slightly talked down about in this conversation. They are the folk who want to spend their lives in their room coming up with cool stuff. It might be a couple of folk doing that in their back room who do not necessarily judge their success on whether they become the next big global thing.

To use the metaphor of an ecosystem that Paul Durrant has used two or three times, those people

are the healthy soil out of which something fantastic might well grow, but if we are obsessed only with the size of the thing that grows, we will end up destroying the healthy soil. Do we not need to value and recognise that layer of people who will not necessarily be the next big thing, because that is where the skills, creativity and enthusiasm come from?

**Brian Baglow:** Indeed we do. One of the biggest changes that has occurred in the UK industry, including the Scottish industry, in the past few years has been the growth in smaller companies, which Dave Thomson of Ludometrics refers to as boutique companies. They are not interested in scaling or actively going out and becoming the next GTA—they are happy to sit and make games, find funding and do work for hire to fund themselves. It is a lifestyle choice. People get into the games industry because they want to make games. That is an important part of the sector that might be overlooked if we do not recognise that that is a valid choice for many people coming into the industry in Scotland.

**Patrick Harvie:** That being the case, is there an argument that we should think about not just business support services in the conventional sense, but games or interactivity as a medium through which communication happens?

Public bodies spend a huge amount of money on communicating things to people. At the showcase on Wednesday, we met a few companies that work with public bodies. One works with a health organisation and others work with charities. Some games are not just commercial products; they are methods of communicating. Is there not a case for thinking about that kind of relationship with the sector rather than just about business support for companies to grow?

**Brian Baglow:** Absolutely. One of my big contentions is that we need to stop thinking about the rescuing princesses thing. Games are moving far beyond that to interactive media and transformative technology. We have a number of companies that are involved in that. Quartic Llama in Dundee, which is made up of Abertay graduates, worked with the National Theatre of Scotland to create a game that people can experience only by walking round Dundee—there are no graphics. Guerrilla Tea Games in Dundee and Chunk in Glasgow have worked with Cancer Research UK, using real-world clinical data specifically to speed up research into a cure for cancer. Games are moving far beyond the old models and the ways in which we tend to think about them.

11:30

We have focused on games developers this morning. We need to be aware that there are also tools technologies, analytics companies, animators, musicians, audio producers and motion capture studios. There is a whole ecosystem around the games sector. At my last count, Scotland had close to 170 games-related companies or companies working with games to a greater or lesser degree.

On the fluid nature of the sector, as Paul Durrant said, the simple idea that people who are games developers can access a certain kind of support is the wrong way to go. It maintains a silo mentality, which will not accommodate the rapid evolution within the industry.

**Chris van der Kuyl:** If you got the impression that we were talking down people who work in the band structure—let us call it that—I apologise. That is not the impression that I wanted to put over. There is a broader ecosystem and there are issues at different levels, but that band idea is alive and thriving.

About 10 years ago, the received wisdom in the industry was that it was probably time to shut up shop apart from games that were owned by the giant publishers with infinite pockets, because games budgets would be \$100 million—and people should forget it if they could not make a game for \$100 million. Then smartphones came along. Then indy publishing and platforms such as Steam came along, which gave people access to global markets instantly.

More broadly, this is about the ubiquity of the internet. Up in Stockholm, a bedroom programmer came up with his 20th game. During the day, he was working for another games company, King.com, which makes Candy Crush. At night, he was coding his own games. The game was Minecraft. He never took a penny of external funding. He just sweated blood and tears until he could not sweat any more. He put a call out to his small fan base and asked them to pay a little bit. It was not finished but, if they did that, he might get enough to stop working for part of the time and do his day job part time. The rest is history. Very quickly, he had an enormous income stream coming in from the outside world.

Several years later—probably five years—that business had grown so big that Markus Persson, sometimes known as Notch, had created a monster, in effect, which he never set out to do. He wanted to be a bedroom programmer and to hang out with his indie fans. Four months ago, as is probably well known, he sold the company to Microsoft for \$2.5 billion, having received not one dollar of external financing and not one minute of government intervention in Sweden. It was just

one guy in a bedroom, who then built a slightly bigger bedroom and a slightly bigger business.

**Patrick Harvie:** I am sure he has a very nice bedroom now.

**Chris van der Kuyl:** Indeed. The point is that there is no lack of recognition of the importance of the fresh talent—the bands—that we see coming through. The next Minecraft will probably come from one of them. That is a huge part of the ecosystem.

**Patrick Harvie:** The point that I was making was that the ones who do not create the next Minecraft but carry on being the fertile soil, as I described it, are still crucial.

**Chris van der Kuyl:** Absolutely. They are vital to the whole ecosystem. In our studio, we have a couple of guys who are trying to build businesses themselves and who are coming to work for us to get some money for a while. We know that they will probably go off and do their own thing, and that is fine.

It takes a brilliant blend of huge amounts of creativity, technical talent and entrepreneurial spirit and management to grow such businesses. If we are to have a thriving ecosystem, we need it to be top to toe. We need the huge companies, the tiny companies, the entrepreneurial characters to bring new stuff through and access to markets. Scotland is one of the places in the world with a fairly unique blend of creativity, visual talent, technology talent, chutzpah and entrepreneurial drive. We perhaps need more of that, but we certainly have it.

**Paul Durrant:** To take Patrick Harvie's analogy one step further, we can think about the way in which those who are searching to address the problem of antibiotic resistance have turned to the soil to find the organisms—the gems—that will crack that problem. Having a fertile ecosystem means that we will always have the potential for some gems to be discovered and turned into something big for Scotland.

**Dennis Robertson:** I have a brief supplementary question. I think that Chris van der Kuyl touched on the point early on. Following on from Patrick Harvie's analogy, I note that the world of gaming has moved on. Health and tourism were mentioned earlier. Games provide an opportunity for education and learning for our young people and their use for people who are further down the ageing stream can keep them alert and active, but do you also see them as providing an opportunity for people with learning disabilities or sensory impairments?

I confess that I have never played a computer game, regardless of the fact that I use an iPhone 6. Looking at the world of people who have

sensory impairments or learning disabilities, what are the opportunities to take things forward and engage those people, using games not just as games but perhaps as learning tools as well?

**Chris van der Kuyl:** It is unlikely, but I will try to be quick—

**Dennis Robertson:** That will be impressive. *[Laughter.]*

**Chris van der Kuyl:** I will be as quick as I can so that my colleagues can come in.

The games industry is the most powerful and engaging form of entertainment in the world. When you put the right game experience in front of somebody, it will engage them like no other form of entertainment. Games are being used in education very successfully. Minecraft is the single biggest educational tool in the world now. MinecraftEdu is enormous. One of Microsoft's main reasons for investing in Minecraft was its future in education.

As regards individuals who have various impairments or learning difficulties, we have been blown away by the response that we have had from our fans in relation to kids who are on the autistic spectrum or have other challenges in life. Minecraft is a method of communication that they have been able to use unlike any other, and it is not just limited to us. Across the spectrum, a huge number of games are being used in therapies and in educational contexts. There are a number of charities around the games sector that try to help us as games developers, as well as the games industry, to adapt and develop games that work. It is a huge area and one that Scotland should excel in even more.

**Colin MacDonald:** I echo that. Games are being used in a huge number of sectors. Education and accessibility are huge, but there is almost no industry that is not taking something from games—there is now the gamification industry. I would say yes to education and yes to accessibility, but it does not stop there.

**Brian Baglow:** I have been coming to a whole bunch of different events—parliamentary, public sector and so on—for the past several years, and I was always the guy standing in the corner, because people would go, “And what do you do? Oh.” They would slink away because there was someone more important to speak to. Now, an awful lot of the interest that I am getting is from outside the games sector. It is from people in education, in politics and in the various public sector bodies.

Healthcare and working with people with various disabilities or learning impairments is a huge area. We are talking about devices that are ubiquitous—they are in everyone's pockets—and as Chris van

der Kuyl and Colin MacDonald said, we are only starting the process.

Last week, we invited along a project from Abertay University that is specifically for people with various sight impairments. It is about creating games for them so that they can interact without having full 20/20 vision or despite having a number of different complaints.

Scotland has been a pioneer in using games for education. Derek Robertson, through the consolarium, has done that for a number of years. The problem, again, is that we do not really hear about these things very much.

**Dennis Robertson:** Is that because you market them with games?

**Brian Baglow:** They have tended not to be commercial releases.

I will make one last point. One of my big issues is that we are not taken seriously as an industry within Scotland. Yesterday, there was a huge piece in *The Scotsman*—which I know you all read—that talked about the crisis in the film industry and said that MSPs are calling in the film sector. If anyone covers this meeting, especially anyone from *The Scotsman* or *The Herald*, I will be gobsmacked. The problem is that people are not reading an awful lot about the games industry, but we are doing an awful lot and there is so much more that we can do.

I say again that the whole idea of innovating beyond the essential entertainment side of things is something that can only go up and outwards into a global market.

**The Convener:** On that note, we will have to call it a day, as we are slightly over our time. It has been a fascinating session and I think that we have all learned a lot. On behalf of the committee, I thank all four panellists for coming along and answering our questions. The committee will be taking evidence on the subject for another two or three weeks, and in due course we will produce a report.

At this point, the committee will move into private session.

11:40

*Meeting continued in private until 12:19.*

Members who would like a printed copy of the *Official Report* to be forwarded to them should give notice to SPICe.

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