



The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

INFRASTRUCTURE AND CAPITAL INVESTMENT COMMITTEE

Wednesday 23 November 2011

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CONTENTS

	Col.
INTERESTS.....	405
BROADBAND INFRASTRUCTURE INQUIRY.....	406
SUBORDINATE LEGISLATION.....	438
Highlands and Islands Air Services (Scotland) Act 1980 Amendment Regulations 2011 (SS1 2011/367)	438
WITNESS EXPENSES	438

INFRASTRUCTURE AND CAPITAL INVESTMENT COMMITTEE
10th Meeting 2011, Session 4

CONVENER

*Maureen Watt (Aberdeen South and North Kincardine) (SNP)

DEPUTY CONVENER

*Jamie Hepburn (Cumbernauld and Kilsyth) (SNP)

COMMITTEE MEMBERS

*Malcolm Chisholm (Edinburgh Northern and Leith) (Lab)
*Neil Findlay (Lothian) (Lab)
*Adam Ingram (Carrick, Cumnock and Doon Valley) (SNP)
*Alex Johnstone (North East Scotland) (Con)
*Gordon MacDonald (Edinburgh Pentlands) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Ged Bell (Dundee City Council)
David Byers (South of Scotland Alliance)
Geoff Hobson (Angus Broadband Co-operative)
Roddy Matheson (Aberdeen City and Shire Economic Future)
Dr Andrew Muir (FarrPoint Ltd)
Vicki Nairn (Pathfinder North)
Duncan Nisbet (South of Scotland Alliance)
Stuart Robertson (Highlands and Islands Enterprise)
Rita Stephen (Aberdeen City and Shire Economic Future)
Sheena Watson (Digital Fife)

CLERK TO THE COMMITTEE

Steve Farrell

LOCATION

Committee Room 4

Scottish Parliament

Infrastructure and Capital Investment Committee

Wednesday 23 November 2011

[The Convener opened the meeting at 10:00]

Interests

The Convener (Maureen Watt): Good morning and welcome to the 10th meeting of the Infrastructure and Capital Investment Committee in session 4. I remind members to switch off their mobile phones and BlackBerrys, as they impact on the broadcasting system.

The first item is a declaration of interests. I welcome Alex Johnstone to the committee and invite him to declare any relevant interests.

Alex Johnstone (North East Scotland) (Con): Thank you, convener. I have thought long and hard about this and believe that I have no registrable interests that are relevant to my membership of the committee.

The Convener: I hope that you enjoy your time on the committee, Alex.

Broadband Infrastructure Inquiry

10:00

The Convener: Agenda item 2 is an evidence-taking session for our inquiry on broadband infrastructure in Scotland. We will hear from witnesses who are or have been involved in local and community broadband projects across Scotland. I welcome to the meeting Vicki Nairn from pathfinder north; Stuart Robertson from Highlands and Islands Enterprise; Roddy Matheson and Rita Stephen from Aberdeen city and shire economic forum; Geoff Hobson from Angus Broadband Co-operative; Ged Bell from Dundee City Council; Sheena Watson from digital Fife; David Byers and Duncan Nisbet from the south of Scotland alliance; and Dr Andrew Muir from community broadband Scotland. As you will see, I have tried to seat the witnesses according to their location from the north to the south of the country.

Instead of having a normal question-and-answer session, we will aim to discuss a range of key themes. As you can imagine, if we went round each panel member in turn, the session would be quite long. Instead, I will simply introduce themes for discussion among members and witnesses. I ask everyone to be quite concise; for example, if you agree with someone, you can say, "I agree," rather than give a long explanation of why you agree. The themes that we will look at include: the background to local projects; the experience of engagement with project partners; the technology used in projects; funding issues; engagement with broadband users; and whether we need a more strategic approach to rolling out broadband.

We will start with the background to local projects. I ask our witnesses to tell us about the types of projects that are being taken forward in different areas of Scotland and to tell us why such projects were considered necessary, about any challenges that you have had to overcome and about your progress and achievements so far. I will start with Vicki Nairn, who is from the north of the country.

Vicki Nairn (Pathfinder North): I represent the pathfinder north partnership, which is led by Highland Council and comprises five local authorities across the Highlands and Islands. Our successful shared services agreement has resulted in a seven-year £70 million contract, which is funded by £62 million from the Scottish Government and £8 million from partner contributions. The contract connects 756 local authority sites, including council offices and schools, across the Highlands and Islands.

The partnership was formed out of a desire to use local authority spending power for aggregated procurement. Local authorities that had a synergy in relation to broadband requirements and network needs came together to deliver effective public services across the Highlands and Islands. We are in the fifth year of the contract, which expires in 2014, and the partners are putting together an options appraisal and business case. That work will be completed in December. We are also working very closely with the Scottish Government, which is part of our project board, and with our HIE colleagues in relation to broadband delivery UK and what our next requirement for the Highlands and Islands might look like.

We might come to this later, but pathfinder north partners and Highland Council feel that effective broadband is essential for the social and economic growth of the Highlands and Islands.

The Convener: So pathfinder north and Highlands and Islands Enterprise are doing something with BDUK.

Stuart Robertson (Highlands and Islands Enterprise): That is correct. Highlands and Islands Enterprise has a long history of supporting telecommunications developments, going back to the late 1980s and early 1990s. We have been involved in a number of projects. We feel that public intervention is required because our region tends to be at the tail end of the roll-out of any commercial telecoms developments and, without some sort of intervention, we might get those services three to five years after the urban parts of the country get them, if we get them at all. Highlands and Islands Enterprise has always considered telecoms infrastructure to be an important part of the essential infrastructure of a successful and competitive region.

Following the roll-out of first-generation broadband, which the Scottish Government did for the whole of Scotland in 2004-05, there was a feeling that the job had been done. However, we could see the next generation of broadband coming over the horizon. We kept working on the issue and pulled together a sort of road map that set out the way forward so, when the United Kingdom Government put some money into BDUK, we were in a good position to successfully bid for some of it. We then kicked off a procurement exercise to try to encourage the telecoms industry to work with us to introduce the new, next-generation services into the Highlands and Islands as soon as possible.

The Convener: Are we talking about two separate projects? Are you and pathfinder north working together?

Stuart Robertson: We are working closely together, but there are two separate projects. The pathfinder project involves the local authorities working together and aggregating the broadband for schools and council offices. Our project is aimed at what I call the economic development side of telecoms development and involves getting the telecoms industry to make available in the north of Scotland and rural areas the services that it is rolling out in urban Scotland. We are trying to ensure that general broadband services are available to small businesses and householders. We do not seek specific bandwidths in specific locations; we look for a more general upgrading of the telecoms network in the Highlands and Islands.

The Convener: Who will give us an outline of what is happening in the north-east? Will it be Rita Stephen or Roddy Matheson?

Rita Stephen (Aberdeen City and Shire Economic Future): We will do it between us, but I will start.

We do not have projects that are up and running. We have submitted to the committee succinct but detailed written evidence. There is overwhelming evidence of the urgent need for broadband upgrading, both from local businesses and from the community. Uniquely, we have conducted a detailed infrastructure audit of the whole of north-east Scotland and have considered how we could make better use of the infrastructure that we have. We have interviewed more than 280 businesses and people about user requirements and demand stimulation and we have identified the problems that they have. We have summarised that information for the committee using bar charts. I know that lots of MSPs have received letters from constituents on the subject, because I have been copied into those letters.

We have identified three potential projects, all of which we have fully costed. Overwhelmingly, those projects would benefit not only the north-east but the whole of Scotland, given that we have a large percentage of businesses that operate globally. We feel strongly that there is greater potential to harness local public sector infrastructure in line with the McClelland report.

Roddy Matheson (Aberdeen City and Shire Economic Future): At the risk of repetition, I will say that our work has very much been driven by the demands of the local economy and citizens. Many people in north-east Scotland work in the energy industry and have access to high-speed broadband in their workplace. Often, that is contracted privately rather than through public access channels. At home, those people find a marked contrast with what they enjoy at their work. One need travel only about 7 miles out of the centre of Aberdeen before broadband speeds of

less than half a megabit per second are the norm rather than the exception.

The people with whom we have engaged vary from farmers who rely on broadband to complete their integrated administration and control system form or who must go to consultants who have access to that through to the complete range of small and medium-sized enterprises and large businesses. We have also considered the needs of the future delivery of public services, taking on board the McClelland report, and we have considered infrastructure that is owned by Aberdeen City Council and Aberdeenshire Council as part of the proposed solution.

Geoff Hobson (Angus Broadband Co-operative): Angus Broadband Co-operative is a small volunteer organisation with very low funds. Back in the early 2000s, a community website was developed by a community group to pull together the communities in the glens of Angus and to promote the glens. It became clear that one problem was that people in the glens could not get reliable broadband, so the group formed a subgroup to consider broadband delivery. In 2007, it commissioned a report from the community broadband network. Based on that report, we had a lot of discussion and eventually formed the Angus Broadband Co-operative as a separate entity. We succeeded in finding local funding and produced a detailed plan with costings for providing a fibre network to the Angus glens, but we do not have funding to build it.

The Convener: I am sorry, but I am not with you. You say that you have funding, but—

Geoff Hobson: We received funding to commission the planning work to get an idea of the cost of building a network. We are now looking for some way of putting that into effect.

Ged Bell (Dundee City Council): The project in Dundee is different from those that the committee has heard about so far. It is a purely private sector initiative involving a fibre connectivity provider that the council had used on a small scale pre-2007. One of the companies in a group approached us with a willingness to fibre up the entire city, with connections to every home and business premises. That was a private sector initiative, but the council was keen to engage with the company because we saw the economic benefits of very-high-speed broadband being available to every household.

The model was that residents and businesses would have to opt in for the free connection, and an open-access network would be delivered. A service provider would then sell services using the connection. Given the costs, the only way in which the work could be done was for the company, H₂O Networks, to use patented fibre-in-the-sewer

technologies, with microtrench digging to get across the pavements to homes.

The council worked closely with the company to identify the lowest-cost ways of getting the fibre into homes while ensuring that our pavement and road infrastructure was properly reinstated. The council was heavily engaged with the company in defining new standards and developing that low-cost model.

The project started in 2010. Unfortunately, the company had financial difficulties later in 2010 and the project was stood down. The company went into administration and a new company has arisen. Initially, the work was going to be done in Bournemouth and Dundee. The Bournemouth work has restarted and the new company intends to complete that before it looks at restarting the works in Dundee.

10:15

Sheena Watson (Digital Fife): I am here to talk about the work of digital Fife. Fife has issues of rurality, although they are not the same as the issues in other areas that people have spoken about this morning.

Of Fife's 52 exchanges, 22 are one-market exchanges, which provide services to rural areas and are likely to need public investment in order to provide superfast broadband. Although Fife has no not-spots, we have multiple slow spots and exchanges that we have concerns about. We are concerned about Fife's rural areas, which have about 18 per cent of the total population. Some of those data zones are in the worst 10 per cent of rural areas. We see the issue as being about social inclusion and the need to address poverty and inequality, as well as being about economic drivers.

Digital Fife is a long-standing community-driven project on digital inclusion issues. It is a third sector and council initiative, run with community organisations. It has a community portal with more than 250 community websites. There is a learning part to it as well—1,200 learners are involved.

We also have the smarter Fife communities portal and we have recently adopted a digital inclusion strategy, which has been a useful vehicle for working with economic development, education and other services to look at digital inclusion issues and the BDUK application. Our angle might be slightly different but we have a strong approach to encouraging take-up of broadband use.

David Byers (South of Scotland Alliance): The south of Scotland is very much like the Highlands and Islands from the point of view of rurality and exclusion. We face all the same

infrastructure challenges as people face in the Highlands and Islands.

The driver for our area was very much the same sentiment that was expressed by Lord Carter in his “Digital Britain” report. The technology has moved beyond the stage at which having access to it conferred advantage to the point at which not having it is imposing disadvantage, particularly on rural economies. Even our public sector networks have to pay premium prices over long-distance tariffs to get the service. Many local small businesses are effectively actively excluded from participation in state-of-the-art digital activities to drive their businesses.

We put together our project through co-operation involving Dumfries and Galloway Council, Scottish Borders Council and Scottish Enterprise. We have managed to marshal a shared vision among those public sector partners and a commitment to design a plan that will, we hope—and as the Highlands and Islands are trying to do—leverage investment in better telecommunications infrastructure throughout the region to allow all parts of the economy to move forward and progress more effectively into the digital economy.

Dr Andrew Muir (FarrPoint Ltd): I should clarify my position slightly. My day job is as a director of a telecoms consultancy company. As such, I have been involved in broadband projects for a large number of years and I am currently working with a number of the projects that you have heard about today. Although you have me sitting in a position that indicates that I am based down south—in fact, I live in Edinburgh—I should probably be sitting next to Vicki Nairn, because I am originally from Achiltibuie up on the north-west coast, so being interested in broadband is essential for me.

Having spoken to small communities that are interested in trying to develop projects, a couple of colleagues and I decided that what those communities really needed was a resource centre where they could go and find out a bit more about broadband and how they might go about setting up a project. We created the website communitybroadbandscotland.org to try to help them out. We have not developed it a whole lot, but we still think that it is a good resource and that it could be developed further.

The Convener: Are you the only person who knows what is going on in all these other projects, Dr Muir, or do you folks all speak to one another so that you are not reinventing the wheel in your own patch?

Stuart Robertson: Co-operation and sharing of information are probably as good now as they have ever been. I have been involved in telecoms

development for quite a number of years. There was a tendency in the past to try to get an advantage for your region over other regions, but I think that that has now gone. We are trying to share the lessons that we have learned as widely as possible. Having got money from BDUK, we have an obligation to participate in sessions to pass on information to other parts of the country. We are talking to one another more than we have ever done in the past.

The Convener: Is that speeding up all your processes? I see that Rita Stephen wants to come in. For the purposes of the *Official Report*, I point out that her organisation is Aberdeen city and shire economic future, not Aberdeen city and shire economic forum.

Rita Stephen: I endorse what has just been said. Most of us who are here today were invited to a session with the Scottish Government in June to look at what broadband is and where it is going. We shared information, and quite a number of councils and economic development agencies have been in touch with us directly. We are talking to Angus, Cairngorms and Perth and Kinross. In particular, I explained to everyone at the session how we carried out the infrastructure audit. There was a proposal, which is mentioned in the written evidence, that some funding might go towards bringing the rest of Scotland up to speed with the work that we have already done. We cannot emphasise enough that what we would like to do in the north-east will benefit the whole of Scotland and internationalise Scotland’s ability to trade globally. The connection speeds that we have at the moment are really hampering us.

Neil Findlay (Lothian) (Lab): Looking at the vast array of people sitting in front of me, I am wondering why we have all these separate projects, which presumably all have their own staff, managers and consultants and which are all competing for funding, instead of having one Scotland-wide national roll-out of broadband. Is there an obvious answer to that?

Rita Stephen: I will attempt to answer that—perhaps others will support me. In the work that we did we identified that it is quite difficult to have a pan-north-east Scotland project that suits everybody, never mind a pan-Scotland project, because there are rural areas and city areas, for which at least three or four different projects are needed. However, there is no reason why you could not link up Angus, Perth, the north-east of Scotland and Cairngorms, for example.

We are acutely aware that, to date, public sector funding has been driving the initiative, so the most cost-effective solution is uppermost in our mind. The evidence that we have given to the committee has come from the limited amount of money that we have spent so far and how we can get best

value from public sector funding and use existing public sector networks to encourage the private sector to come in.

Neil Findlay: I am not quite seeing how the present arrangement can be cost effective. You are only a small representative group and presumably what you do is repeated across the country. How can it be cost effective to have all these organisations, with all their costs, chasing the same money?

Rita Stephen: We have to identify what is missing and what is needed to fill the gaps. Once that has been done, we will have to decide whether the service can be doubled up or included in other areas. I think that most of us are at that stage.

Neil Findlay: Can that not be done at the national level? We have heard evidence that that is what is happening in Wales.

Vicki Nairn: Your question is quite reasonable. A certain amount of aggregation has already happened. In pathfinder north, five Highlands and Islands local authorities have aggregated their requirements for a number of reasons, the first of which was to get commercial interest in our individual regions. That was difficult because our population density is not attractive to commercial providers. In pathfinder south, two local authorities come together.

We could do a lot more. We set up the pathfinder projects because there is no alternative at the moment. However, Scotland could have a national broadband strategy, and work is being done on that. In lieu of any alternative, certainly from a local authority perspective, we have tried to use our limited resources as best as we can but we would welcome additional input.

For us, the broadband issue is critical. We have a timing issue because our procurement contract expires in 2014. While looking at new procurement, we have been working with the Scottish Government, which sits on our project board and is therefore included in the process, and we are also looking at our local authority networks, which supply schools and council offices, to see whether we can roll those suppliers out to the community.

We hoped that the first procurement would come on the back of pathfinder north but we found that, although the purpose of that contract was to provide local authority connectivity, the providers were still not that engaged with going out to the smaller communities, especially in the more remote and rural areas. That is still a big issue for us; we are looking at it at the moment.

The option appraisal and business case that we are putting together is about looking at how we

can work with other organisations. We are talking to other organisations in England and across the water in Northern Ireland. It is very much us driving those discussions in accordance with what we think is best practice.

Your question is very pertinent and I have been asking it myself. How can we link into the bigger picture?

David Byers: Neil Findlay is absolutely right that the size of the Scottish market suggests that it is obvious that we should just be able to do it all together. However, there is a tension between that suggestion, competition law and state aid rules. The telecoms industry is investing in our city regions of its own volition. We have to be careful to make sure that we do not displace that natural market activity by running publicly funded interventions. Where the central belt sits in the geography of Scotland has a natural effect of fragmenting some of our geographical projects.

There is a tension where we are trying to create projects of sufficient scale to be of interest to the telecoms and investment industry without contravening competition law and state aid regulations.

10:30

Sheena Watson: It is right to say that there are tensions around the tiering and timing of funding. We have the recommendations from the McClelland review but we also have BDUK, and funding is also available from the European Union. That all needs to be meshed together in a useful way.

There is also an urgency behind the demands for improvement in the public sector network. In Fife, for example, it is urgent that we move ahead. We are keen to make the public network as open as possible and to work with as many providers as possible, but we have to consider how that matches up with the timing of the BDUK applications and European Union funding.

Dr Muir: That was a good question from Neil Findlay. It depends what we are trying to do. If we are trying to create the infrastructure on which everything else will sit, it makes sense to try to do that on as large a scale as possible, rather than splitting the process up into separate projects. It gets more complicated, however, if we are trying to aggregate the needs of local authorities and the national health service, for example—the actual services—on top of the infrastructure. Trying to aggregate all that on a large scale can get difficult, but if we are trying to get the underlying infrastructure in place, yes, we should do it on a large scale.

Neil Findlay: I do not know any details of how Wales is doing this. How is it getting round the state aid rules?

Sheena Watson: I do not have an answer to how Wales is taking this work forward. Perhaps David Byers would like to answer that question.

David Byers: I think that Wales enjoys a slightly different status from the majority of Scotland in regard to the type of structural funding interventions that it is allowed to take forward. It still, largely, has objective 1 status, which means that direct public sector investment in infrastructure is permissible. That is not the case in Scotland.

Alex Johnstone: Is it fair to say that quite a few of the people sitting round the table today are engaged in projects that are designed to beat the market, so to speak, because if we just let the market deal with the provision of broadband, it would get to people eventually, but perhaps only in time for our grandchildren to benefit from it? Is it your objective to speed up that process and to target effort in the key areas that you are concerned about?

Stuart Robertson: That is correct. There is a precedent for the issue being tackled at Scottish level from the first generation of broadband. At the time, the industry went so far in putting out ADSL. Then, at the later stages of the roll-out, when it became clear that rural Scotland was not going to get the services through industry investment, the Scottish Government developed a Scotland-wide project to cover that.

In some ways, I can see how it could be done at the Scottish level, but we would have to wait almost until we were already behind before we could pinpoint where the intervention was needed. Another argument would be that we have been behind for 20 years because of the rural nature of our area and, although we do not necessarily want to leapfrog others to get to the front end, we want rural Scotland to be able to keep up and minimise the lag. We would prefer a one-year lag to a five-year lag.

Alex Johnstone: Is there an additional problem with the roll-out of such technology, in that, when investment becomes available, it obviously goes to the low-hanging fruit? Are the easiest options taken, in order to achieve the most while spending the least money? Is it also the case that, because the technology moves on, the low-hanging fruit is in the same place as it was before, and not in your area, when the next round of funding comes along?

Stuart Robertson: Yes, that is correct. The telecommunications industry will always go where it sees the largest markets, which are in the urban areas.

Alex Johnstone: So you are looking after yourself because no one else will.

Stuart Robertson: Yes.

Vicki Nairn: Pathfinder north is in a slightly different position, in that we are very much looking at public sector service delivery. There is an important distinction to be drawn; there probably should not be, but there is. For us, this is about how we deliver effective public services, and we cannot do that without broadband. Our businesses have become highly dependent on it. Modernising public sector service delivery is all about using information and communications technology in the sector to generate efficiencies and deliver benefits, and a big part of that involves broadband connectivity. I can think of a number of examples off the top of my head. We want to speed up CRM systems, and to speed up interaction with the customer—

The Convener: Can you tell us what CRM systems are?

Vicki Nairn: Customer relationship management systems—the front-facing customer systems.

That very much depends on having effective broadband solutions. In Highland Council, for instance, we have 37 separate offices. We have far more front-office points of contact where customers can come in, and they expect an instant service. In our society, people expect to get the service that they want when they want it, and they want choice of provision.

This is about looking after ourselves. The aim is very much about linking into national objectives such as customer first, having systems that underpin those objectives and which allow us to do linkage, and delivering our efficiency targets.

The Convener: I would like to talk about partners. Vicki Nairn talks about public service—mainly council and not even health—delivery, and then there is talk about the private sector. ACSEF is talking mainly about businesses. Things are still very fragmented in your areas, as you are not talking about health boards, councils and private businesses together. How do you identify partners? Rita Stephen said that many businesses in the north-east had put in their own connectivity. How can we get more joined-up thinking across the board? Have any of you already been involved in such an approach? Has it not worked? What are the barriers?

Ged Bell: Again, our project is different from those of colleagues, as the Dundee City Council area is entirely urban.

In trying to engender greater interest from the private sector deliverer of the project, we engaged with businesses in the city, particularly media

businesses, and the knowledge economy. We engaged with residents and tenants associations—we were keen to have connections to every one of the 13,000 council houses in the city—and with the chamber of commerce and its elected members. In trying to entice in private sector investment, we tried to get as many stakeholders and partners as possible engaged. There will be a return on investment in the city if there is willingness to make that investment. We had a co-operative methodology with our partners in the city.

Sheena Watson: When we were pulling together our digital inclusion strategy, we were pushing against an open door in the council to get education and economic development people together and, more widely, health and other players. That was fairly straightforward. It is clear that people quite readily see the benefits of working together. That is probably a shared experience—I see Vicki Nairn nodding—but it is a matter of providing the platforms for that to happen.

I would like to take the discussion back a step. We have talked about the recommendations in the McClelland review, and the public sector—the NHS and local authorities—working together. There may be a need for a compelling reason for people in the public sector to get together, just as I might provide a compelling reason for people to get online and increase the take-up of broadband. If we are going to go down the line of having a national network, a compelling reason may be needed to bring together people who have networks that they think are sufficient for their needs.

The Convener: If, for example, private firms already have structures in place and somebody else comes in, would that slow down the service that they already get? I am not techie enough to know about that.

Rita Stephen: I clarify that what we are potentially talking about is not just for the business community. There are three separate projects, which, I would argue, could probably be replicated throughout Scotland. One is an open-access fibre network that would join up all the business parts and get superfast broadband speed for doing global business 24/7 in different time zones.

The second project is a rural access strategy. Many people have talked about the very big problem that the whole of Scotland has with poor connectivity. Every exchange in Scotland needs to be upgraded. Alex Johnstone talked about beating the market, but I would say that it is about stimulating the market. When there is no competition, nobody is going to upgrade exchanges.

The third project is about establishing the next generation of wireless technology for the city, which every city in Scotland needs—although Glasgow is probably pretty well served already—because the technology moves at such a pace. That one is probably cost neutral, as the public sector could put up its buildings to give access.

You mentioned the NHS. We have already engaged with the NHS. You will know that Aberdeen is a world centre of excellence for remote medicine and works with the flying doctor service. If you happened to take ill—God forbid—on a flight anywhere in Europe or beyond, the call would come into Aberdeen royal infirmary and the diagnosis would be done remotely. There is potential to expand that technology with three-dimensional imaging. Instead of someone in Banff waiting nine months to see their consultant, they could see him within a month, sitting in a room in Banff while the consultant was sitting in a room in Aberdeen, and receive their diagnosis. If the technology is improved, everybody will benefit from it; it is not just about the business community.

Vicki Nairn: The convener asked about partnerships. For me, a number of factors are involved in looking forward and determining what has or has not worked. A lot depends on how far advanced organisations are at the point at which the demand is identified; a lot also depends on the procurement arrangements that they have in place. At the moment, part of the issue in Scotland is the fact that there are a number of different procurements in place with different start and end dates. Some of those procurements may be national contracts, some may be local, and some may be aggregated. There are lots of different starting points.

We are all progressing against our own business requirements, although there is a common purpose that all the public sector organisations share. However, the requirements in health, for instance, might be very different from those in local authorities. We all have the same end in mind—better public services for the citizen—and we have tried, where we can, to find partners and to share. At pathfinder north, we are working with the identity and passport service on remote access passport applications and with our NHS partners and our community planning partners. The work is very much driven at a local level, and national direction could be really helpful in giving us a common purpose other than that we want to get the best broadband that we can for our communities.

David Byers: There are a couple of fairly fundamental issues. The technology is now fundamental to every business process in every sphere of economic activity. The information technology industry has always been supply

driven, and we are on the cusp of its driving the next paradigm shift—or platform shift, as it is called—to a cloud computing environment. We have seen the advertisements on television on taking services to the cloud, which just means everything being run within the network system. Critically, that requires absolutely everybody, wherever they are working, to have the highest-quality connectivity.

I do not want to get too technical—the numbers are self-explanatory. At the moment, in an office network environment, the system runs at 100 megabits per second. That is what delivers the on-screen interface to the human user and allows them to input and access information at a speed that makes it simple to work with. When services are moved to the cloud—in essence, that is the kind of environment that McClelland is talking about for shared services between public sector functions—every worker in every office, whether they are in a private business, the public sector or the health service, must still be able to access their information at speeds that make the system practical. We need the infrastructure to be absolutely ubiquitous—to go to every public sector office, whether in the smallest village or in the city centre. It must also be the same for all small and medium-sized enterprises, as there are massive cost savings to be realised through cheaper products and services from their using software in that way. In essence, the debate is no longer about getting an advantage. As I said earlier, when I mentioned what Lord Carter said, the fact is that, if we do not have this technology, our national economy will be at a huge disadvantage in comparison with our international competitors' economies.

10:45

We need to design a system that can provide what we will critically need in five to 10 years' time in order to make the economy work. Ultimately, we need to get fibre connectivity to every fixed-premises address in the country and we need to ensure that every individual who is working anywhere in the country has access to mobile connectivity. Those two benchmarks should be what we are aiming for in terms of what we are trying to get out of all our disparate projects at the moment.

We are all trying to push for the same ultimate goal. The challenge is, how do we stimulate the market so that most of the investment is done privately, in as normal a market context as possible, so that we can minimise the amount of direct investment that the public purse has to make in order to facilitate that national asset development?

Dr Muir: Although it might seem that some of the projects are operating independently, there are direct and indirect links between many of them. For example, the pathfinder north project that is serving the local authorities on their sites has indirect benefits for the NHS and other users in the Highlands. Pathfinder created more infrastructure in the Highlands, which enabled the NHS to get faster and cheaper services for general practitioners and hospitals. The infrastructure that was created as a result of the pathfinder and HIE projects also has knock-on benefits for businesses and residents.

The Convener: We will move on to the issue of technologies. Someone mentioned fibre and mobile connections and someone else—I think that it was David Byers—said that we need every house in every glen to be connected by fibre, which brought images of pound signs rolling before my eyes.

Is a fibre connection necessary for every house? Should we be using other technologies, such as wireless and so on? Is it realistic to say that every house in every nook and cranny should be connected by fibre? Is that not outrageously expensive?

Ged Bell: There is a distinction between rural and urban areas. The cost of fibre connections for sparsely populated rural areas would make that next to impossible. It starts to be possible in an urban environment but the companies are interested in taking fibre to homes and businesses only if they can find an absolutely low-cost way of doing things.

That is where we in Dundee believe that we have happened upon something useful. The patented notion of running the fibre through the sewer network is much cheaper than having to dig up the roads. Another low-cost idea is having a digger going along a pavement, digging a 20mm or 150mm microtrench and laying the cable and covering it at the same time.

Such possibilities are available in an urban area. We have to work with the private sector to find lower-cost ways of providing fibre connections to homes and businesses—if infrastructure providers can cut their capital costs, there is a greater chance of them doing that.

Stuart Robertson: That is a fair assessment of where we are at the moment. I understood David Byers's point to be more that our aspiration should be to move towards fibre everywhere. That may well happen over time, but to try to do that now would be expensive. However, the advantage of fibre is that, as far as we can see, it is the technology with the most potential to be a future-proofed solution that will allow continuing increases in bandwidth over time.

In a project such as ours, in which we are carrying out procurement and we have input of European money, we have to take a technology-neutral approach—we cannot dictate the technology that the industry uses. The industry will offer us suggestions using the technologies of their choice and we have to make a judgment about that when we go through our procurement.

It is generally felt that fibre is the best way forward wherever it is affordable. Wireless would certainly seem to enable rural areas to get coverage where fibre is perhaps not currently affordable. There is also satellite, although we see that not exactly as a technology of last resort but as a niche technology that does not have the bandwidth to be a mass market solution. There will be a number of technologies, but overall we feel that fibre is what we want to end up with because it offers the most future proofing of any solution.

Alex Johnstone: I want to cover a couple of points. The first relates to Dundee. It is great to hear that there is a project in place, although perhaps not progressing at the moment, to provide cable or fibre for the whole of Dundee. You mentioned some aspects of the business case that justifies that, but what is the potential return for investors? Specifically, does it include cable television provision?

Ged Bell: It is a private sector project, but our understanding of the return is that providers would put in high-capacity services to bring what they term quad-play potential, which could include, for example, television services, phone services, data services, and home security and medical diagnostic services. Our understanding is that they need to make the investment, get the fibre in the ground and have an open-access network. Then, when there is a critical mass of connections, large-scale internet service providers, and even some television providers, will be encouraged to sell their services on top of that.

Alex Johnstone: Therefore, you are at a fairly advanced stage not only in delivery but in identifying potential markets. You are perhaps showing the way for others—although it might not deliver a great deal for rural provision.

Ged Bell: Yes, it is a method of provision for urban rather than rural areas.

Alex Johnstone: That is where I was going for my next question, which relates to the Angus glens. You mentioned that your objective when you set out was to see fibre connection in the glens. Is that still your objective? Are we now looking at a situation in which near-market technologies, such as the potential provision of 4G, could overtake the need for cable or fibre provision in the glens, or is there a desire to do both?

Geoff Hobson: When we were initially advised, we were told that wireless is problematic because of the geography of the glens. We would need to place our transmitters and so on at points that are largely inaccessible because they are on top of the hills and do not have a power supply. We took the view that, if we made one big investment in fibring the glens, we would have a network that would survive and still be functional 20, 30 or 50 years later. We could put new technology on either end and, provided that there was an infrastructure of fibre in the ground, the system would continue to work. It would therefore be future proofed.

We still want to go for fibre if we can. I can give you some idea of the cost involved because we did a detailed plan. We defined a boundary using three community council areas, covering 2,440-odd properties. The initial estimate was £16.5 million but when we spoke to our people we managed to get that down to £9 million, which I am afraid to say is still rather a lot of money.

Alex Johnstone: So you are still playing the lottery and hoping.

Geoff Hobson: We had some—though not very many—discussions with Angus Council, which is involved with the East of Scotland European Consortium. We are waiting to see what comes out of that, but we certainly do not have £9 million to put into infrastructure.

Alex Johnstone: Would you be interested in 4G if it could be demonstrated that it would achieve your objectives?

Geoff Hobson: Mobile coverage in the glens is rather low.

Alex Johnstone: Indeed. I am fully aware of the state of mobile coverage in the glens.

Geoff Hobson: Initially we thought that if we put in fibre we would be able to install mobile repeaters, which would increase the mobile coverage. In other words, we looked at the issue the other way round.

Alex Johnstone: So it is a kind of chicken-or-egg situation.

Roddy Matheson: I think that it is universally agreed that fibre optic cable is the way to future proof any new development. For a start, it is very difficult to overload. However, the situation in rural areas is difficult not just because of the sparse population but because of the access charges that BT wishes to make to anyone accessing its poles and ducts, which have by and large discouraged new entrants to the market.

We should also remember that the current market might not be the market of the future. In the USA, for example, the installation of fibre optic cabling has been driven by Americans' demand for

high-definition and three-dimensional television, and that is probably the only way we will be able to deliver those things to large parts of Scotland. We have to consider not only broadband but the services that citizens in rural areas will look for in future.

The Convener: How do we get over BT's monopoly, the dependence on its network and so on?

Roddy Matheson: We probably just have to go round it. We have been advised that it might take the Office of Communications five years to renegotiate access charges. Meanwhile the world moves on.

We have been told that it took 60 years to get Britain totally cabled up for telephones; we certainly do not have 60 years to get everyone connected up to broadband. BT can either participate or be obstructive, but I do not think that, as far as individual projects are concerned, we can afford to take the view that it will be co-operative. That could set us back considerably.

David Byers: This might not be popular but, in BT's defence, I should point out that it is the only infrastructure provider in the country that has a policy of operating an open-access network. All the other operators pick and choose the customers whom they allow to use their infrastructure.

BT is probably doing as much as it can within the scope of its private sector shareholder obligations and, by and large, it is the network on which everyone still depends. Twenty-odd years after the industry was privatised, it still has a practical economic monopoly in the country, but we have to balance that with the fact that every other telecommunications company that has tried to enter the market in that time—not least the example in Dundee that was highlighted—has gone through restructuring, consolidation and amalgamation in order to survive.

Ultimately, the customers will dictate who will be the winners and losers in the technology race. As Stuart Robertson said, everybody can clearly see that fibre will be the essential core of the infrastructure throughout the country, whoever builds it. Customers want to use the services that it can deliver in their homes, businesses and offices, but they are also starting to use mobile technology services in droves. We have those two platforms that satisfy different needs in our daily lives, and we must work to provide the infrastructure for both.

11:00

At present, if we licensed 4G telephone technology and rolled it out properly, it could act

as a substitute for fibre deployment in the hard-to-reach areas. However, given our current understanding of the technologies, even 4G technology is pushing the theoretical limits and physics of sending signals through the airwaves, whereas fibre does not have the same capacity limit. We need to do both.

We must work with the telecoms companies that are in the market. If we persuaded other operators to adopt open-access policies for their networks—or if they were regulated to operate such policies—so that at the wholesale level in the telecoms marketplace operators could trade bits of networks between themselves, we would have a much more efficient way of rolling out the infrastructure around the country.

It would be like the roads, in that anybody can use any bit of road for the same fixed price depending on the class of vehicle that they drive. Councils in Aberdeen or Dundee do not try to build roads in Dumfries and Galloway or the Borders and say, "Hey, use our roads, because they're better than the ones that these guys have built." All our roads are plugged together and any user can use any of them.

We need the network providers to work together around the country to roll out infrastructure that everybody uses on a reciprocal trading basis, rather than have the situation in which BT is the sole incumbent that is obliged to open its network to everybody else but everybody else can build private networks.

Jamie Hepburn (Cumbernauld and Kilsyth) (SNP): Would the most obvious way of achieving that be to oblige other providers to do the same?

The Convener: Who are we talking about? Is it companies such as Sky and Virgin Media?

David Byers: Yes.

Rita Stephen: To follow on from what David Byers said about stimulating the market, we need to flush out the other operators. There is a feeling that they cannot compete with BT, so there is no point. We must present to them what we have and what we are looking for. A lot of people want to know how we did our infrastructure audit. We identified that an optic cable that is not owned by BT runs the length of the A90 and A98. As far as we are concerned, that is underutilised infrastructure that could be put to better use. I wonder where else in Scotland there is underutilised infrastructure.

The Convener: Do you know who owns the cable?

Rita Stephen: Yes, we do. As our submission states, we are talking to the owner.

Roddy Matheson: The owner has agreed to make the cable available.

Rita Stephen: Obviously, BT knew that the cable was there, but it did not tell anybody. We had to find out for ourselves.

The Convener: So a valuable part of your work has been identifying existing infrastructure. Are the other witnesses aware of the underutilisation of existing infrastructure?

Stuart Robertson: For us, the situation is the other way round. If we are to use next-generation technology, we need to get fibre further out into the Highlands and Islands. One problem is the heavy reliance on microwave links, particularly to the islands and up the west coast. We have a backbone infrastructure challenge before we even get to the issues of the access network from the exchange to the customer. There is not much underused fibre lying around in the Highlands and Islands.

The Convener: We move on to the funding issues. Some of you have already mentioned how much funding your project will require. How do you go about obtaining funding, from whom do you get it and how do you assess whether a project has delivered value for money? I was interested in the fact that Stuart Robertson almost seemed to be saying that it was necessary to take what you can get rather than set the parameters in a bid.

Stuart Robertson: I was only making the point that we are obliged to be technology neutral when it comes to procurement and that we do not try to steer or influence the market. We are looking for the private sector to come to us with solutions. Companies should be able to offer the solutions that they feel are effective, although we take technological factors into consideration when we choose the winning bidder.

On funding, I made the point that the backbone infrastructure is part of the challenge for us. We have a big bill on the backbone infrastructure to find the funding for even before we start linking up people's homes.

The Convener: You got £100 million from BDUK—

Stuart Robertson: If only—it was £10 million.

The Convener: I am sorry. What are you using that money for?

Stuart Robertson: At the moment, we have £10 million in the pot from BDUK, we have earmarked £5 million of our own funding and we have access to European regional development funding of £5 million. Our project started as a pilot, but we have expanded its scope with a view to looking at a full roll-out.

Using information that we have received from the industry and from consultants, we have estimated that it could be a £300 million project if we are to achieve what we want to achieve in the Highlands and Islands. We are not saying that all that would come from the public sector, but even if we were to achieve an ideal solution of a 50:50 split with the private sector, we would still be looking for £150 million. We realise that that is a very large bill, but we are looking for a long-term strategy.

We have issued a tender and we are getting back outline solutions. The industry is telling us how much money it would like us to provide, so we are probably at the front edge when it comes to getting feedback from the industry on how much it will look for from the public sector. At this stage, the industry is coming up with figures that are a starting point in the negotiations, which we want to improve on as we go through the procurement process.

David Byers mentioned the shift in platform, which we need to recognise will probably require large amounts of investment, but if we could get to a much more fibre-based infrastructure, we could be spending to save over the future 10 years or even longer—some of the fibre technology has a lifetime of 30 years.

Vicki Nairn: I will deal first with the last part of your question, which was about best value and value for money.

We worked with the Scottish Government in 2010, when it commissioned an independent report to understand whether pathfinder north was providing value for money. That report looked at all elements, from procurement to the aggregation technology, and it did extensive data analysis and collection. Its conclusion was that the project was providing value for money and that it had a number of key benefits, including significant educational benefits. It led to effective public sector service delivery and, through links with our partners, as Andrew Muir mentioned, it had secondary benefits to health.

I mentioned at the start of the meeting that the contract was valued at £70 million, of which £62 million was provided by the Scottish Government. The partners were very appreciative of that. Going forward, we know that we need to go through a new procurement process. There is a timescale attached to that, because we need to have replacement procurement arrangements in place from April 2014, so there is some urgency. We are working through the options appraisal and the business case to understand where some of that funding might come from. In August of this year, the pathfinder north partners submitted a funding bid to the relevant Scottish Government minister, Alex Neil, to make the Government aware of the

situation, the background to it and the risks associated with it.

That is a concern for us at present. The funding bid was in the region of £60 million, on the basis that we need to undertake a procurement exercise to confirm what the exact figure will be. We hope that it will be less, because we would be utilising the technology that is already in place and the infrastructure into which funding has already gone. However, to return to your earlier question, we need to understand how we can interest the market and make our procurement attractive to commercial suppliers. In order to do that, we are looking at further aggregation with additional local authority partners and trying to generate interest in the public sector and among other partners.

Neil Findlay: I am interested in what Stuart Robertson said about having to be technology neutral. Funding is very tight for everything across the board. Given that you must be technology neutral and that money is scarce, is there a danger—to use a past analogy—that some people will be buying a Betamax instead of a VHS?

Stuart Robertson: Being technology neutral is a way of ensuring that we do not go down a technological dead end. Effectively, we are relying on the industry to come forward with its solutions, rather than me and my consultant colleagues deciding that the best thing for the Highlands and Islands would be technology X and going out and buying it. We might get it badly wrong.

There is a feeling that the industry probably has a better handle than us on what the right technology would be, and that is the approach that Europe takes in saying that we must be technology neutral. If we are using public money to intervene, we should not distort the market or displace private sector investment.

I am comfortable with the technology-neutral approach, because I would not want to second-guess where the technology is going. One example is the connected communities project that we undertook in the Western Isles. We chose to put in place a wireless infrastructure: that has certain benefits as we can control it, but we also have obligations and liabilities that stem from it. We must look after the technology and work out an exit route. The technology is quite robust and it still has potential, but we made a choice in that case to do something by our own hand. Along with that come certain additional obligations over and above helping the industry to get wider coverage for what it wants to put in place.

Neil Findlay: Is there a danger that the industry will promote solution X as opposed to solution Y because there are one or two more pounds in solution X?

Stuart Robertson: That is why we must be aware of what is happening and what has been proposed in the rest of the country. To ensure that we get value for money in public expenditure, we are in a sense using what a provider might be offering Cornwall, for example, as a benchmark of what we consider it reasonable for that provider to offer us. I would hope that if we looked at the wider market, we would avoid being fobbed off with some expensive and potentially soon-to-be-obsolete technology.

The Convener: Does anyone else want to say where they are getting the money from?

Duncan Nisbet (South of Scotland Alliance): I echo some of the comments from colleagues in the Highlands and Islands about their situation. We understand approximately how much it will cost to deliver effectively the infrastructure to meet the targets of the Scottish Government, the UK Government and the European Union for 2020.

The issue for us is how we pay for that. With regard to how much money we can attract from the private sector, it is about how much return the sector will get from the investment that it puts in. We can work to maximise the return that will go into that investment in the first place.

As has been mentioned this morning, there are three key areas: the residential market, the business sector and the public sector. The only thing that we can control is the public sector traffic, so we need to ensure that we maximise the use of that in order to leverage additional private sector investment.

In the south of Scotland, the intention is to run the procurement for the infrastructure project in parallel with the procurement for the south of Scotland broadband pathfinder project, which expires the year before the north one. We can use that to leverage as much additional private sector investment as we can.

11:15

Within state aid regulations, there is a clawback mechanism that we would have in any infrastructure contracts so that, when revenues hit a certain threshold, there would be clawback of revenue to the partners who ran the procurement in the first place. Our intention would be to reinvest that clawback straight back into the infrastructure. On day one it is unlikely that there will be the funding to deliver the whole infrastructure, but through the lifetime of the contract we can feed in additional money through that clawback mechanism to expand the infrastructure and fund areas that we could not have reached prior to that.

As has been mentioned, the infrastructure becomes the enabler for savings to be made

throughout the public sector as well as the private sector. We are looking at mechanisms for realising those savings but reinvesting them into increasing the network, which in turn increases the revenue that can come back out of that network.

The Convener: Highlands and Islands said that it needed about £300 million. What sort of figure are you looking at in the south of Scotland?

Duncan Nisbet: We are looking at a figure in the region of £120 million.

The Convener: How many years would the investment be for?

Duncan Nisbet: We are looking at investment to deliver the 2020 target.

Stuart Robertson: It is the same for us.

Adam Ingram (Carrick, Cumnock and Doon Valley) (SNP): The reality is that the Scottish Government has access to a £144 million fund, which will clearly not do the job in the timescale that has been allocated for it. How do we use the funding to create the conditions for achieving the targets in 2020? Which projects would you prioritise for funding? What approach would you take to the distribution of that £144 million?

Rita Stephen: I will try to answer that. You have to look at where you are going to get the maximum benefit for your funding. We have all highlighted how we are looking to reduce costs.

The contribution that the public sector could make to reducing costs and creating attractive conditions for operators and suppliers should not be underestimated. One example of that is the rural access strategy for the north-east. Private operators could be allowed to access Aberdeenshire's schools network. Every city in Scotland could have a wireless project. We are, hopefully, long past the concern that we had about putting out microwaves and causing cancer, so the public sector's existing property portfolio could be used as an incentive for wireless operators to deploy base stations in public buildings. That would help to reduce costs and attract operators, and we would share the profits. We need a model in which it is not just the operators that are profiting. I agree that the fund is very limited, but that would make it go that bit further.

We must identify what will get the best bang for our buck. There are three issues: the rural issue; the issue that every exchange has a problem; and the issue that everyone has talked about, which is that Scotland needs to be competitive in a global environment. Why can we not have 1 gigabyte business parks in Scotland? Superfast broadband connectivity would make it attractive for businesses to come to Scotland. Developers could be encouraged, with section 75 consents, to do more fibre to the cabinet every time that they are

building new housing and so on. That would be a way of getting some of that money back.

Adam Ingram: But is not some of that money ring fenced for rural connectivity? Does that limit your ability to do those things?

Rita Stephen: We have some very good examples of areas that were traditionally conceived as rural but which are now effective and efficient business parks. I am not talking about destroying green belt. That covers two bases—mixed development, and rural and business. The energetica project along a 30-mile corridor from Aberdeen to Peterhead is a good example of that. We would like it to be Scotland's first gigabyte business park, and it could be replicated elsewhere. We would then be punching way above our weight and would be a global market force.

Adam Ingram: That is interesting.

Stuart Robertson: There are intermediate targets. There is a target to get everybody up to a minimum of 2Mbps by 2015. I know that that is very mundane in today's world.

I do not remember the exact number of telephone exchanges in Scotland, but something like 63 exchanges in the Highlands and Islands still have the exchange activate 0.5Mbps service, so that is the maximum that people can get and they have a choice of only five providers. There is a high expectation that we will try to do something about those areas in the period to 2015. There is some pressure on us to prioritise them, but it is difficult to see solutions for those exchanges without an improvement in the backbone infrastructure in the Highlands and Islands. We need a balance. We need to strengthen the network in some of our more populated areas so that we can move on to reach those challenging areas. We need to see how much we can do to set the platform that we will build on in the period beyond 2015.

There is a possibility of some £300 million of additional BDUK funding after 2015, at the UK level, and we will probably look for some of that. There is also potential for EU funds. I do not think that any of us is looking only to the Scottish Government for funding. We need to cast our net as widely as possible.

David Byers: There is an element of market progression. When we were doing the first-generation broadband roll-out, it started slowly and the early projects were expensive, but as the market gained momentum, the operators were willing to do more and more by themselves. We spent some £25 million, but in the end we only had to plug the gaps in the really hard-to-reach areas, using public sector investment.

Although everybody would admit that the identified funding resource that is available is probably not enough to do the exercise that we would all love to do, as uptake starts to increase and momentum grows, and as the newer types of broadband become the operating standard for the service providers, we will reach a balance point at which the final cost will become much clearer. I hope that it will be a lot less than the early stage estimates.

That makes it incumbent on us all to work together to leverage the opportunity that we can squeeze from the McClelland strategic review of the way in which the public sector does its business, because it is the biggest single customer in Scotland. It is the cherry on the cake for any network operator. If we can structure the way in which we enter the contract renewal negotiations cleverly and ensure that we demonstrate to the industry that the business is there to be done, we will start to get the private sector coming in on the back of that, which will help to accelerate the process and reduce the unit cost in each of the project areas. It should be only the hardest-to-reach areas that the public sector will need to finance.

Stuart Robertson: It will be incumbent on the projects that reach implementation early to push the uptake of the new services as strongly as possible, because high uptake is the language that the private sector understands. The higher the take-up that we get early on, the better, as it will help us to get best value from the public sector.

The Convener: Rita Stephen said that ACSEF has done quite a few surveys of users. Have the rest of you done that as well? How do you plan to engage non-broadband users? One of the major planks is the low uptake in the city of Glasgow, where access is not a problem. We also have a low uptake among the over-55 sector in Scotland, in comparison with other parts of the UK. Have you come up with engagement strategies? Do you have plans to engage non-broadband users?

Stuart Robertson: Timing is important in that regard. There is nothing worse than trying to convince someone to take a service that you cannot provide them with at the moment. The last time round, in relation to first-generation broadband, we did a lot of awareness-raising work. We have an online project in Sutherland at the moment, and we are doing a number of other things. That effort needs to be stepped up as soon as the service is available on the ground. The push on the demand side is important.

The Convener: What about Geoff Hobson's 2,440 households?

Geoff Hobson: We sent out a postal survey to each of those properties, offering an option of

either a paper or an electronic response. We got a response rate of nearly 11 per cent, which is quite good for that sort of survey. Only 2 per cent of the properties identified themselves as business-only properties. However, when you take into account businesses that are run from someone's home, the figure for businesses goes up to 36 per cent. It is a mainly rural area, and at 36 per cent of the properties in the area some sort of business is being conducted in relation to which internet access would be beneficial. There was a range, from farming to consultancy businesses—all sorts of things. A further large number of people said that they would use a high-speed service in order to avoid commuting to work on some days, which would cut down the cost to them and reduce road traffic.

There would be a high take-up, if we could provide a service.

Rita Stephen: We conducted research in partnership with the Federation of Small Businesses and the Aberdeen Chamber of Commerce, so we got a pretty extensive response from the membership of those bodies. On top of that, our market research demonstrated that there is a deep pool of untapped demand for faster broadband connections, so we recognise that driving up that demand—which will attract the operators, as they will get more customers—requires some additional assistance.

Alongside getting the physical infrastructure right in terms of connectivity, we have developed business support programmes, particularly for SMEs, ranging from one-to-one support for senior business decision makers, to seminars and workshops for various people and web-based support for those who are fairly knowledgeable but need a bit more advice. We also provide remote advice and practical support. That sort of business support service will encourage uptake.

There are still people out there who are terrified of the technology—Roddy Matheson gave an excellent example of that when he talked about farmers having to use it. However, ensuring that there is someone who can show people what to do will increase demand.

David Byers: In the south of Scotland, about 40 per cent of our population do not appear to be broadband users or computer users at the moment. We are proposing to run a smaller-scale pilot project in Annan—we are grateful to the Scottish Government for substantially funding that project—that will partly focus on directly targeting those non-users. We think that engaging them is largely about having a proposition that is of value to them.

We are trying to explore how public sector services such as health and others that are

provided by local authorities could be configured to make them more usable by those people. We want to find out what sort of customer reaction we get and think about what might drive the non-users to engage. Part of that involves a public sector push, similar to the approach taken by the national Government in encouraging businesses to do their VAT and tax returns online.

11:30

We are also hoping to test a couple of slightly more esoteric technologies through the pilot. With luck, we will be able to trial the delivery of broadband through power lines, as well as the use of what is known as white space in the radio spectrum—locally available spectrum space that was released through the digital television switchover. Again, the critical challenge will be to assess whether customers will engage with those novel technologies, or whether we need to back the emerging mass-market winners such as fibre and mobile phone technologies. We are actively trying to target those groups and to test the more novel technical solutions, but the critical issue is to find out what the customer reaction to them will be. Ultimately, it is the customers who decide which technologies work and which ones do not, and how the services will be of benefit to users themselves and to wider society. To pick up on the point made about Betamax and VHS, it was not the technologies that failed; it was the customers voting with their wallets who decided which one worked. That is a critical point that we must bear in mind. We can lead people in a particular direction but, ultimately, the solution has to work for them on a mass-market scale.

Dr Muir: I am not sure that we need to replicate the different surveys of user need and desire for these services. Yes, there are specific issues to do with take-up in Glasgow, but in other areas, we will simply find the same answers. The requirements are the same in the north, the south, the east and the west. I am not sure that we need to do a lot in that regard.

I return to the point that was made earlier about the replication of a lot of work. In relation to the different technologies, it is important that we find a way of capturing what is found in the different projects, bringing that information together and sharing it among the projects. At the moment, there seems to be no good, central co-ordination, yet there are lots of individual projects going on that could benefit from a greater degree of sharing.

The Convener: That perhaps brings us to our final theme, which is on the strategic issues. How can we ensure that all these projects can be linked up over the whole of Scotland? This may be where our recommendations to the Government come in.

What should the Government's role be in developing a Scotland-wide strategy? What part do you want to play in that strategy? I know that we all want more money, but some of you have helpfully touched on the need to make the best use of the money available. What do you think should be in the Government's broadband strategy?

Vicki Nairn: The Scottish Government could assist and work with us in a number of ways—we have heard about some examples of that today. There is a vital role for the Scottish Government in lobbying and persuading the telecoms providers that their investment is needed in all areas, and not just in the big, juicy areas of high population density. There is a great deal of activity among the telecoms providers at the moment, because of the information-gathering period, which will provide a useful opportunity to maximise any advantages. It is also clear that, although there are many demands on funds, there are not a lot of resources.

There should be something in the strategy about public sector procurement aggregation, although I recognise that that area could be quite tricky because everyone is starting from a different place. There cannot be a one-size-fits-all approach. A model around progressive procurement aggregation that allows people in different places to link in at a later date and move towards a shared outcome would be helpful. That would be a helpful strategy for me, sitting in a local authority and representing five local authority partners.

As well as understanding some of the bigger targets that we have talked about today in terms of the Scottish Government's modus operandi for how it wants broadband rolled out, we would find it very helpful to know what information is available to date and how the funds and the strategy can be targeted. We could then link in and support those agendas.

The Convener: Sheena, did you want to come in?

Sheena Watson: I wanted to say something in answer to a previous question, so it is okay.

The Convener: Do tell us about engagement.

Sheena Watson: Engagement has been central to what Fife has done. I want to mention the race online 2012 work in which Fife has taken part. To follow on from what Andrew Muir said, if people have access to or get the chance to try out the technology, there is an incredible appetite for it. We have been doing a fair amount of work with older residents in sheltered housing as well as with parents in low-income areas of Fife who are trying to help their children at primary school. There is a great appetite to get involved. We have

been taking out quite simple technology such as netbooks and broadband dongles, and giving people a chance to try the technology has made a big difference. Our evidence shows that there is a great demand for the technology and people will use it.

The point that I wanted to make was about cost. This might all take a bit of time to deal with, and there is a concern in relation to equalities that people will be left behind, including people who need to apply for jobs online but who do not have the skills or means to do that quickly. People who are already disadvantaged will pay a cost for our taking a while to get there. We know that there is a strong connection between social disadvantage and digital disadvantage. I make a plea in that regard: if we just let things take time, some of the most disadvantaged people in our communities will be left further behind than they already are in relation to accessing services. I know that the Department for Work and Pensions has ambitious plans for getting more people to access benefits online. Those things are drivers to moving forward at a time when we are still talking about the fact that we do not quite have solutions yet to getting people online in Scotland.

The Convener: Many people have made a conscious decision to just use their mobiles, rather than have a land line in their home. They do not realise that they are probably disadvantaging their children, who cannot access information online as part of their homework. Also, as you say, people might need to access jobs and all sorts of other things online. It is a real problem.

Rita, did you want to say something about broadband strategy?

Rita Stephen: I will pick up on what Vicki Nairn said. I do not think that anybody in this room, particularly those who are MSPs or representatives of public sector organisations, underestimates the complexity of seeking to aggregate public sector demand. We all have different goals, budgets, legacy infrastructure, contracts, security needs and politics—are we allowed to mention that word? That makes this a challenge. Public sector bodies generally procure advance-managed services, which do not always lend themselves to being unbundled at wholesale level. We know that that is a challenge.

Sheena Watson made a plea to the committee. I have three. One is to use the public sector contracts as anchor tenants wherever possible. I have given a couple of examples in the north-east. Secondly, to echo what Sheena Watson said, timing is key. Scotland is falling behind other parts of the UK and Europe. We need to ensure that any plan can be implemented quickly—agree the basis for distribution of funds by this winter and run procurements in 2012.

My third plea is that we should not underestimate digital connectivity's potential to save and create jobs. Instead of working out how to get people to work, particularly in the larger conurbations, we can use technology to bring work to them and allow them to work from home or in some business centre. However, we can do that only if we have the technology and the people are trained—and there are plenty of people out there who are desperate for training. Where will the work come from? What about all the big companies that are reducing costs? Those back-office jobs could be delivered through public sector partnerships bringing work to people in their homes or in a business centre, but that can happen only if we have the technology.

David Byers: I echo the comments made by Vicki Nairn and Rita Stephen about the public sector's role. This technology fundamentally drives our collective economic development strategy and fundamentally supports our low-carbon economy strategy, but we need to work together and recognise where the IT industry is taking the world. We are moving to a cloud-computing environment and, as Vicki Nairn has made clear, we very quickly need to work out the road map to take us in that direction. We must identify progressively where the major data centres should be in Scotland and how we can achieve connectivity between those centres and wherever everyone is, using the best technology that we can provide and as quickly as possible. We must also allow the public sector contracts that will be the core driver of commercial activity to link in to that process as soon as possible. That is the optimum way of driving the whole process forward with a national vision but not necessarily with some kind of big-bang national action plan.

Roddy Matheson: Any strategy should contain three elements: first, a recognition that neither Scotland's geography nor its market is homogeneous; secondly, the future-proofing of all new development through regulation stipulating that developers install fibre optic cable from the street cabinet to the end user's premises; and thirdly, promotion by the Government of infrastructure sharing to enable services to reach areas of market or service failure.

Stuart Robertson: I simply ask the Government to recognise the fundamental importance of good connectivity, particularly given that that underpins almost all of its economic strategy. In the modern world, it is so important to be connected.

The Convener: Does anyone wish to comment on issues that they feel have not been covered? If you remember anything on your journey home, you can always submit it in writing.

Duncan Nisbet: It is just worth reiterating that, as members will have heard this morning, a lot of

good work is going on in Scotland to get connectivity into the country and to the areas that the market is not going to reach right now. I think that I can speak for us all in saying that we are working pretty closely with Government officials on this issue and are contributing to national plans in relation not only to infrastructure but to services and the public sector network market.

Roddy Matheson: I do not think that we should see this only in the context of enabling service delivery; after all, there are other benefits as well as those for end users. For example, the NHS in Grampian told us that, by enabling more use of telemedicine, improved broadband connections would have benefits with regard to footfall in their premises and it would certainly welcome the reduced wear and tear on their buildings and reduced pressure in their car parks.

11:45

Vicki Nairn: We touched on this earlier. A number of us around the table who are in the middle of the procurement process or just about to start it are facing timing issues. There is probably no easy solution to what is a big and complex problem but I make a plea that, when solutions are considered, we get as flexible a solution as possible to allow those at different stages of the process to link in at a later date. This complex issue, which is certainly on my horizon, on Stuart Robertson's horizon and, I guess, on the horizon of those in the south of the country, will not be solved within the next few months and it would be helpful if there were some mechanism that allowed us to link in later.

Ged Bell: Three times in the past four years, a US think-tank has recognised Dundee as one of the world's top seven intelligent communities. That does not mean that we all have Tefal-heads but it is all about how we have changed and moved in the direction of a knowledge economy. As someone who was heavily involved in that process, I noticed that the others in the top seven and the ultimate winners of the intelligent communities award had invested in broadband infrastructure. It is a key element for anyone who wants to change and drive their economy forward.

The Convener: That is a good place to end. I thank all the witnesses for their evidence, which will be helpful to our inquiry. As I said, if you remember anything that you wanted to say but did not, you should submit it to us in writing as soon as you can.

11:46

Meeting suspended.

11:51

On resuming—

Subordinate Legislation

Highlands and Islands Air Services (Scotland) Act 1980 Amendment Regulations 2011 (SSI 2011/367)

The Convener: Agenda item 3 is consideration of a negative Scottish statutory instrument. I refer members to paper ICI/S4/11/10/3 and ask them to note that no motion to annul has been lodged. If members have no comments, does the committee agree that it does not wish to make any recommendations on the amendment regulations?

Members *indicated agreement.*

Witness Expenses

11:51

The Convener: I invite the committee to delegate to me, as convener, responsibility for arranging for the Scottish Parliamentary Corporate Body to pay expenses to witnesses for their work on our homelessness and broadband inquiries. Do members agree?

Members *indicated agreement.*

The Convener: As previously agreed, we will move into private for the remaining agenda item.

11:52

Meeting continued in private until 12:27.

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