



OFFICIAL REPORT
AITHISG OIFIGEIL

Public Audit and Post-legislative Scrutiny Committee

Thursday 27 June 2019

Session 5



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PUBLIC AUDIT AND POST-LEGISLATIVE SCRUTINY COMMITTEE
17th Meeting 2019, Session 5

CONVENER

*Jenny Marra (North East Scotland) (Lab)

DEPUTY CONVENER

*Liam Kerr (North East Scotland) (Con)

COMMITTEE MEMBERS

*Colin Beattie (Midlothian North and Musselburgh) (SNP)

*Bill Bowman (North East Scotland) (Con)

*Willie Coffey (Kilmarnock and Irvine Valley) (SNP)

*Alex Neil (Airdrie and Shotts) (SNP)

*Anas Sarwar (Glasgow) (Lab)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Morag Campsie (Audit Scotland)

Gemma Diamond (Audit Scotland)

Caroline Gardner (Auditor General for Scotland)

CLERK TO THE COMMITTEE

Lucy Scharbert

LOCATION

The David Livingstone Room (CR6)

Scottish Parliament

Public Audit and Post-legislative Scrutiny Committee

Thursday 27 June 2019

[The Convener opened the meeting at 09:01]

Decision on Taking Business in Private

The Convener (Jenny Marra): Good morning and welcome to the 17th meeting in 2019 of the Public Audit and Post-legislative Scrutiny Committee. I ask everyone in the gallery to switch off their electronic devices or turn them to silent, please.

Agenda item 1 is a decision on whether to take several items in private. Do members agree to take items 3, 4 and 7 in private?

Members indicated agreement.

Section 23 Report

“Enabling digital government”

The Convener: Item 2 is on the section 23 report, “Enabling digital government”. I welcome to the meeting our witnesses from Audit Scotland: Caroline Gardner, Auditor General for Scotland; Gemma Diamond, senior manager, and Morag Campsie, audit manager.

I invite the Auditor General to make an opening statement.

Caroline Gardner (Auditor General for Scotland): Thank you, convener. Today’s report examines the Scottish Government’s progress in delivering its digital strategy and enabling digital government. Put simply, digital government is modern government. It involves bringing the public, private and voluntary sectors together with citizens to design services that meet users’ needs and deliver better outcomes, making best use of technology and innovation. Building digital government is difficult and takes time, and Governments around the world find it challenging.

The Government published an ambitious digital strategy in March 2017, “Realising Scotland’s full potential in a digital world: a digital strategy for Scotland”. There are signs of good early progress, with a number of initiatives starting to change how organisations design and deliver services. The technical assurance framework and the support offered by the digital transformation division are adding value, but the Government has not had the capacity to share lessons learned or evaluate fully which services are adding the most value in the short term and the longer term.

The Government needs to take a more strategic role and bring people from different sectors together, to develop a shared understanding of roles, priorities and progress. That will require an understanding of the overall investment needed to achieve the strategy, which is not currently in place.

Major digital programmes across the public sector are putting pressure on the system and the shortage of digital skills remains a barrier to progress. The Government has introduced a number of initiatives to address that, such as the digital skills academy. The digital fellowship scheme aims to bring commercial expertise into the Government, but it is small in scale.

There is no quick solution to the shortage of skills in the market, and Audit Scotland’s future work programme includes an audit of the Government’s wider skills planning.

To transform services and make a real difference to the people of Scotland, the public

sector needs to collaborate and innovate. Programmes such as CivTech are helping with that. The Government needs to take a more systematic approach to assessing the opportunities and risks associated with emerging technologies and share its knowledge and plans more widely. Innovation inevitably involves taking risks, which need to be managed well; there is no risk-free option, given that the risks of not embracing new technology are likely to be even greater.

The committee will be aware that, earlier this week, I published a report on the Scottish Public Pensions Agency failed information technology programme. That has inevitably attracted a lot of attention and criticism, and I expect to brief the committee on it after recess, but it is worth noting that the programme started back in 2013. Today's report aims to provide an up-to-date picture of the Government's current arrangements for enabling digital government.

As always, we are happy to answer the committee's questions.

Colin Beattie (Midlothian North and Musselburgh) (SNP): Paragraph 35 of your report suggests that, in 2018,

"the Scottish Government recognised that its governance structures for overseeing digital transformation were not operating effectively."

We have been through that before. The Government put in all sorts of layers to help people give guidance to those who were managing and overseeing the projects. We have commented previously about the multiplicity of those layers. Have any of those structures been delayered and made simpler? Are we simply adding more layers again? What has been the immediate impact of the Government's new approach?

Caroline Gardner: My short answer is that the Government has simplified the structures without necessarily delayering them. The biggest change that we have seen has been to separate the structures that are in place to provide support, collaboration and advice from those that are in place to provide assurance, so that they can be more independent and apply challenge more directly and easily.

There has been a separation, rather than a delayering. In some ways, it is too early to see what the impact of that has been, but we highlight in the report some of the risks and the advantages associated with that.

I ask Gemma Diamond to expand on that.

Gemma Diamond (Audit Scotland): Exhibit 4 sets out the current governance structure, but we point out in paragraph 36 that

"it remains a confusing structure",

with a number of boards in place. We highlight that none of the boards has a role to pull people together across the public sector and to focus solely on digital. We have recommended that the Government considers having a cross-sectoral forum that can do that. Although the boards that bring people together touch on digital, none of them has that as its sole focus, and we think that that is required.

The main changes have been to refocus the central Government digital transformation board to give it a clearer role and responsibility for the overall strategy. As the Auditor General said, it is too early for us to see the impact of that, but we think that the board's remit needs to be more clearly articulated to state that role because, at the moment, it is not clear which board has the main responsibility for delivering the strategy.

Colin Beattie: Are we heading in the right direction?

Gemma Diamond: In the report, we say that there are good signs of progress. Individual projects are starting to make a difference. For example, the Scottish approach to service design—the CivTech initiative—is a great initiative to try to change the public sector's culture and how it does things. However, the projects are small scale. We need something that pulls together the learning, so that we understand why something works, whether that can be done in another place and what the impact is, in order to make the best of all those individual actions.

Colin Beattie: Who is the accountable officer for pulling all that together? Is there one accountable officer?

Gemma Diamond: Absolutely—it is the Government's director general for organisational development and operations.

Colin Beattie: The Auditor General has talked about getting people with the skills and about skill shortages. What is the Government doing to address that? How can we be assured that there is progress in that area? It is key to the future of the project.

Caroline Gardner: You are right—it is key to doing this work. As the report says, some initiatives are positive. The digital academy, which aims to focus on developing the right skills—not just purely IT technical skills, but programme management and project management—is one of them; the digital fellowship scheme, which aims to bring in people with the right skills from the commercial sector to work with Government for a period, is a good initiative, too. However, those are all quite small scale, and, on their own, they will

not address the need for such skills across the public sector, let alone in the wider economy.

As I said in my opening remarks, we will be looking at that area in due course. I know that a number of members have asked questions about that previously. It is potentially one of the most significant barriers to making progress against the strategy to the timescale that the Government has set out.

Colin Beattie: Given the high profile of the lack of skills, or of the lack of individuals with the right skills in the right place, has enough been done? Is someone in Government looking at the big picture and pulling everything together?

Caroline Gardner: We say in the report that the Government needs to have a clearer picture of the programme of development across the public sector. At the moment, there is a risk that some of the big developments are competing against each other for the same skills. In the report, we show the number of major investment projects over the next 10 years or so. There are some very big ones, including the social security programme, the Police Scotland programme and the National Records of Scotland census project. Nobody has a picture of when the peaks of demand will come and what skills or money will be required. To us, it feels important for the Government to have that picture to enable it to prioritise who works where and to plan which skills need to be developed over the period.

Morag Campsie can add to that.

Morag Campsie (Audit Scotland): The Scottish Government's people director is looking at the wider workforce plan for the Scottish Government and across central Government bodies. As part of that, the director has looked at the skills that the directorates are struggling to get and found that those are programme management skills, commercial skills, leadership skills and specific IT skills. The Government has put in place a number of things over the past year. For example, it has tried to shorten recruitment processes to get people in more quickly, and it has adapted the candidate assessment process so that it is more aligned with the process in the private sector. For example, the Government now asks for CVs rather than taking the standard civil service approach. The Government is starting to do things differently, but that is work in progress.

As the Auditor General said, we recommend that there be a wider view across the Scottish public sector to assess what major programmes are going on, to look to the future to see where the pinch points might be and then to put in place plans to help to address that.

Liam Kerr (North East Scotland) (Con): My first question is on key message 3 in the report. I

hope that the committee will indulge me if I read it out for the benefit of those watching. It states:

"The Scottish Government does not have a complete picture of what has been achieved across the public sector so far, including which actions have had the most impact and where there are gaps in progress. And it does not know how much public money is being invested across the public sector to achieve the strategy's actions, or what is needed to ... deliver on its ambition."

I will come back to that but, looking backwards, in October 2017, we took evidence from the Scottish Government on your report, "Principles for a digital future: Lessons learned from public sector ICT projects". We pointed out at the time that that was the third report on the issue that you had produced in five years and that we had recently looked at the i6 project as well as the project for common agricultural policy payments. We sought assurances that the Scottish Government and public sector bodies understood that there had been failures and that lessons were being learned. However, it does not appear that they have been learned. Will you comment on that, please?

Caroline Gardner: The Government has taken steps in getting a clearer understanding of central Government digital investment and the priorities for it. For the Scottish Government and the agencies and non-departmental public bodies that are close to it, there is now a register of major capital projects, which includes digital infrastructure investment, and a board is looking at that element of investment. There is still work to be done, but there has been progress.

The point that we try to draw out in the report is that the Scottish Government is well placed to take a view across public service as a whole; indeed, it is the only body that can do so. It can look across the national health service and local government to get a sense of where there is scope to develop common platforms for things such as identity verification, which is key for a number of public services, or payments to and from public services. The Government can ensure that that work is done in a way that can be built on by public bodies right across the public sector, that investment is being prioritised well and that lessons are being learned across the piece.

For a while, I have been having a conversation with Government about what it is accountable for. Clearly, in narrow terms, it is not accountable for what the 32 local authorities across Scotland do.

Equally, a Government that is taking a partnership and outcomes-based approach to the way in which it leads Scotland, with the intention of improving services by working closely with people across the public sector and more widely, has to play that role; indeed it is implicit in the digital strategy. It is that next step of saying, "We're

talking not just about central Government bodies but about health and local government. We've got a shared understanding of purpose, priorities and where the investment will make the biggest difference." This report homes in on that.

09:15

Liam Kerr: You mentioned the investment several times. There is a section on investment in your report, which indicates that the Scottish Government

"does not know how much money is currently being invested"

across the public sector and that there was "no baseline assessment" of how much money would be needed. This is not the first time that we have read about such issues in your reports. The committee was particularly concerned about issues to do with children and young people's mental health, and early learning and childcare. Is there any evidence that things are changing and will continue to change across the piece?

Caroline Gardner: You are right that this is another report in which we have set out that although we think that a strategy is a positive step forward, there are gaps in what is needed to make that strategy a reality. To us, an important part of making the digital strategy happen would be to have had a picture by now of the investment that is needed to deliver it. We are seeing progress, but we are also still seeing gaps that are barriers to making a reality of the ambitions that the Government has set itself. Does Gemma Diamond want to say a bit more about the investment question?

Gemma Diamond: Absolutely. You are right that when the strategy was developed, there was no baseline for what would be needed to deliver it. With digital technology, it is sometimes quite difficult to identify where the money is going. To allow some of the ambitions of the digital strategy to happen, there needs to be an understanding of how much is being invested to keep current systems going—to keep the lights on—and how much resource is available to invest in the new, more innovative parts of technology and the new way of service delivery. That understanding is not there across the public sector at the moment.

Liam Kerr: This is the final thought from me. I am going to be a little blunt here. I read this report and it feels like a kind of "Right, Said Fred" way of governing: "I've got a great idea. Let's do it! What about the planning? We haven't done that." That issue seems to come back to this committee time and time again. We have talked about lessons being learned, but is that approach going to change? Instead of having a great idea and running with it, will we see some proper planning,

so that the outcomes that I am sure we all want will actually be achieved?

Caroline Gardner: We are genuinely seeing some steps in the right direction in relation to digital, and more widely. There is a recognition that although putting in place a strategy is an important first step, it is only a first step; beyond that, all of the building blocks need to come into line to make a reality of the strategy. The strategy is two years old. We say in the report that we are seeing some of those building blocks here, but they have been slow in coming into place. The prize of getting this right is significant, but so are the risks of not getting it right. I do not want to be reporting another large IT failure to this committee within the next 12 months. If all the building blocks are not in place, the risk is that the lessons are not being learned and the priorities are not being set in the right way. That is not to say that some of the building blocks are not in place, but they all need to be there.

Anas Sarwar (Glasgow) (Lab): I want to pick up on a question that Colin Beattie asked. Auditor General, you rightly said that digital government is modern government. If digital strategy and IT projects are to be a Government priority, who has ministerial responsibility for their oversight?

Caroline Gardner: At Cabinet level, there is a relatively new ministerial post for digital—the Minister for Public Finance and Digital Economy—which is held by Ms Forbes. We think that allowing a focus for digital within Government is a positive step forward.

Anas Sarwar: I absolutely agree.

I want to ask some general questions. Why are we so poor at IT projects? When I say "we", I mean the public and private sectors in Scotland and the rest of the United Kingdom.

Caroline Gardner: You are right in saying that the problem is much wider than just the Scottish Government. Another factor is that Government IT projects tend to get much more scrutiny than private sector IT projects do, unless the latter cause a breakdown in services to the public, as we have seen in the banking sector. Part of the reason is simply that technology is moving so fast that people tend to learn as they go every time, and partly it is that, UK-wide, we do not have the skills needed, or in the numbers needed, to be able to deliver what is required.

One of the interesting things for the team here, who have been focusing on digital for a while, is that whenever we look at an IT system that has gone wrong, we find that it is often the same fairly simple and basic things that were not got right at the very beginning. That is why we published the report that Mr Kerr referred to earlier, "Principles for a digital future", which aims to set out exactly

what people need to think about from the get-go to minimise the risks of things going wrong.

Anas Sarwar: You mentioned a lack of skills. Is that at a strategic level in decision making and oversight, or at the bottom end in the mechanics of building a good IT project? Or is it a combination of both, plus everything in between?

Caroline Gardner: It is a combination of both. Perhaps Gemma Diamond can expand.

Gemma Diamond: We have seen that leadership plays an important role in the success of an IT project. It matters to have the tone set at the top about the importance of the project and the fact that it is not a separate project for IT but is part of core business. That really makes a difference.

We have also seen that there is a lack of the right skills to do the project build and, equally, that there are not necessarily the right skills among non-executive members of boards to effectively scrutinise the big decisions as they happen. There is a lack of skills throughout.

Anas Sarwar: There is some expertise in the UK in building successful IT projects. Is the problem, in part, that we are not turning to the right people for advice, guidance and support? If the skills do not exist in the UK, are there places outside the UK to which we should be turning for skills and advice?

Gemma Diamond: That is a difficult question. One of the things that we looked at when we worked on "Principles for a digital future" was that it can be difficult for people to recognise what skills they need if they do not have those skills themselves.

Some of the initiatives that the Scottish Government has brought in are useful in that regard. For example, there is the digital leaders programme, which is about getting leaders in the public sector more aware of digital changes and more embedded in that way of thinking, so that they can understand what skills they lack in their organisations and how best to get them in. There is also the digital fellowship programme, which aims to bring commercial expertise and exposure to different ways of doing things to senior positions in Government.

We also say in the report that the Government should consider how it can readily get access to expertise through models such as the council of economic advisers to ensure that it consistently gets the most up-to-date knowledge, experience and skills to enable digital government.

Anas Sarwar: This is my final question, convener.

Do you think that part of the issue is a clunkiness in the public sector, the mechanics of government, processes or—I will be self-critical—men in suits sitting making decisions about things that do not relate to everyday advances in technology? When we speak to experts in many fields, they say, "You guys are on a completely different planet from what is happening in reality. There is a disconnect between what you think works with Government tick boxes and what works on the ground". Is there a disconnect? If so, how do we fix it?

Caroline Gardner: There is probably an element of that. Looking at some of the local companies that have been global successes, such as FanDuel and Skyscanner, we can see that they are able to move quicker than Government. That is for good reason, because risks are inevitably taken with investments, but the risk appetite should be lower and there should be more oversight and governance structures in place with Government money than when early-stage start-ups work with private investors and venture capitalists. There are differences there.

We talk in the report about some of the ways in which Government is getting more agile. It is recognising what the needs are, using initiatives such as CivTech to bring in the skills to find small-scale solutions that can be scaled up, and recruiting people more swiftly, rather than through traditional public sector recruitment processes. It is a fine balance, but, as Gemma Diamond said, getting more of that expertise and leadership all the way through Government and public bodies is an important way of starting to balance that out a bit while not sweeping away the checks that we would always expect to have in relation to public investment.

Anas Sarwar: I know that I have already said this, but this is my final question, convener.

Should we buy more things off the shelf, rather than build them from scratch? There are lots of great pieces of technology and IT projects out there that would be phenomenal for the public sector, if we took them on. However, it is often the case that we try to rebuild what we have or build software ourselves. If we bought more off the shelf, would that help?

Caroline Gardner: The honest answer is that it depends. I think that, in the past, public sector people leading projects like the digital transformation initiative have not been good enough at saying what the right approach is and whether we should buy something, build it ourselves or collaborate with other public bodies to put in place something that is much more widely usable.

Gemma Diamond: A key part of the digital strategy is to look elsewhere to see whether there is something that can be used—essentially, the motto “reuse before rebuild” is in place.

Again, we say in the report that a more strategic view is being taken. The Government now has a lot of information to do with the projects that are under way, particularly across central Government. It needs to use that information better and say, “Next year, have we got four public bodies that are looking to buy or to do something around a better case management workflow? Can they collaborate to do that together?”

We have often seen that the processes in the public sector are complex, but there are common workflows across public bodies, including finance systems, customer relationship management systems and case management systems. There can be more collaboration and a strategic approach to that, which we do not see at the moment.

Willie Coffey (Kilmarnock and Irvine Valley) (SNP): Anas Sarwar asked whether we should buy things off the shelf—i6 was basically off-the-shelf Spanish software and that did not work for us at all. There are lessons to be learned on whether to take one approach or another, but the key aspect is understanding from the outset what we want and getting a solution that is based on requirements. However, that is another story.

Another question was about why IT projects fail more often than not. Undoubtedly, there is a clear disparity between the public and private sectors when it comes to IT, and it is not just Scotland that faces challenges in that regard. You have mentioned the CivTech programme a few times. That Scottish Government programme tries to bring together the public and private sectors to deliver solutions, and, as I note from your report, it is having some success in doing that. Indeed, it is being copied by an Australian province—I think that it is Queensland. There are good messages in relation to CivTech.

Will you give us a flavour of what is happening internationally on the digital public services agenda? I am more familiar with the situation in Estonia, because its representatives visited the Parliament recently and told us about their digital public services agenda. Perhaps you could also give us a few pointers about where Scotland could be following good practice from elsewhere.

Caroline Gardner: The team has done a lot of work on finding good practice internationally. Do you want to kick off, Gemma?

Gemma Diamond: We published an international supplement alongside the report, to bring some of that to life. It is true that every Government around the world is tackling the same

issues. Some Governments are having more success in some areas than others. It was interesting for us to have a look at what is happening around the world. Mr Coffey is right about Estonia—people often point to that example. It had a slightly different starting position, because its ID cards unlock a lot of access to common public services.

We often look at Australia. We have seen a lot of similarity, with a lot of projects having difficulties—there has been reporting of high-profile project difficulties. Australia’s approach to assurance is similar to that of the Scottish Government.

In the international supplement, we included a snapshot of the information that one of the Australian Governments issues about its major projects. There is much more transparency about what the projects are, where they are at, where the money is being spent and what progress has been made. That is great for seeing exactly what is happening. It is also great for public bodies and the public to see what other projects are going on across the public sector. We thought that that was an interesting example. The approach that is taken by Scotland is very common.

09:30

In addition, the Ontario Government has recently put its digital strategy, along with initiatives like the UK Government’s tell us once service—whereby if information is provided to the Government, it will share that across the public sector and will not make people provide that information and the accompanying documentation over and over again—into legislation. That legislation also cements in place within Government leadership roles such as chief digital officer, and it requires public bodies to follow the standards that have been put in place. That is a slightly different approach from that of the Scottish Government, but it shows what different Governments around the world are doing.

Willie Coffey: Can you see any evidence that those approaches are leading to the successful delivery of IT projects? Members of the committee have been seeking that evidence for a number of years. Are those approaches resulting in such success more often than not?

Gemma Diamond: That is a difficult question to answer. Some of the initiatives in question are quite new; time will tell. We are keeping a close eye on the work in Australia, which is just a couple of years ahead of where the Scottish Government is. We should be able to see the impact of that coming through.

Willie Coffey: You mentioned the Estonian experience, where people have digital identity

cards. I think that a lot of people in Scotland and the UK would have issues with that, although, as you said, Estonia had a different starting point. For example, child benefit is paid automatically by the Estonian Government and people get a text to tell them that the payment is in their bank account. Imagine having such a system here—that would be wonderful. The price of allowing that to happen is everyone having an ID card in their possession, but there are protections around that. We can probably learn some lessons from that.

What is it about the digital public services agenda that you have told us about that will lead to us delivering better IT projects in the future? Is the issue all about skills or is it about management? What are the areas that we need to improve on to allow us to deliver IT projects more successfully?

Caroline Gardner: We have talked about leadership and skills, which are key, as Gemma Diamond has outlined.

With regard to your point about Estonia and the ID card, one of the reasons why we think that a common platform for ID verification here in Scotland is so important is that it would unlock the potential to do similar things. Social Security Scotland would be able to make payments much more quickly and easily without having to perform the checks that it needs to do at the moment if there was a straightforward, cross-public sector way of verifying that someone is who they say that they are when they make a claim. That would facilitate access, when people rang their general practitioner, to other records within the health service and other public services. Things such as access to social housing would become much easier and more joined up if we could get such common platforms in place.

The same is true with a common payments platform, which makes payments to and from Government much smoother, and avoids having to go into the slightly speculative realms of Blockchain, Bitcoin and cryptocurrencies. It enables people's identity to be verified, and allows payments to be made and received, very quickly. Such a system could make a huge difference, if we can get it right. It must extend across the public sector and not be limited to central Government, the NHS or local government.

Willie Coffey: Is successful software project delivery down to having the right skills?

Caroline Gardner: It probably is, primarily, although Morag Campsie can say more about that.

Morag Campsie: Skills is a huge issue, as we have said many times. Leadership is important, too, but skills are fundamental.

Willie Coffey: I might come back in later on.

Alex Neil (Airdrie and Shotts) (SNP): This week's report on the Scottish Public Pensions Agency shows that this is an on-going problem. We will undoubtedly deal with that in more detail after the summer recess.

I want to burrow down into the issue of skills, which are key. You have made the point that there have been some initiatives, such as the digital academy, but the scale of those initiatives is nowhere near where it needs to be. To what extent does the activity on skills need to be scaled up? Is it not the case that two broad sets of skills are required—not just IT and software development skills, but project management skills? It seems that there is an even more dire shortage of project management skills than there is of the IT skills, and there is a very dire shortage of them.

Caroline Gardner: The short answer is yes, it needs to be scaled up. As Gemma Diamond said, some of the initiatives are showing their value, but they are quite small scale. The exhibit on page 17 gives a sense of how many big projects are happening in quite a short period, all of which need the same skills. You are right that there is a need for direct technical skills as well as for programme and project management skills. There is also a need for commercial expertise to enable the public sector to contract well and in different ways. Whether it is a short, sharp CivTech-type initiative or a £190 million social security programme over time, that needs to be done effectively and we need to ensure that we get the benefits that we want and manage the risks effectively in spending public money.

I had a third thing in my head, but it has entirely flown out of it, so I ask Gemma Diamond and Morag Campsie whether they would like to come in.

Gemma Diamond: As well as the skills issue, a change of culture is needed, so that there is a move from thinking, "This is something for the IT department and it's all about the IT skills," to thinking that it is just a way of running business and how modern Governments do business. That culture change is happening, but at a slow rate. That is where the leadership is needed to set the tone and say that the approach is part of how we do business and how we deliver services. We need to ensure that everybody across the public sector thinks that way and does not think that something is just an IT problem when actually it is about how to design services in the way that users expect, putting their needs first. As well as dealing with the skills issue, the cultural change needs to be accelerated so that such work is accepted as just part of government.

Alex Neil: Do we not need to pin down the numbers? We have about 5,000 IT graduates in

Scotland every year, and it is estimated that we need about 12,500, so we are 7,500 short across the piece every year. Across Europe, there is a shortage of 300,000 people with the relevant IT skills. Is it not time that, as part of the Scottish Government's planning for the future, it says, "To do this, we need X number of additional people with IT skills and X number with project management skills," and then puts the programmes in place to do that?

Caroline Gardner: You are right. Actually, that was my third point that I lost.

Alex Neil: I thought so—that is why I asked the question. [*Laughter.*]

Caroline Gardner: Thank you.

It is not just about the immediate skills that we need this year or in the next three or five years. We need to look right back to when children start school and think about technical and digital education all the way through. We need to deal with the gender gap, because we know that there is still a big issue with the number of girls and young women studying science, technology, engineering and maths. Dealing with that issue would have benefits for the gender pay gap and for the skills coming through. We need to think about what the further and higher education system needs to do. We need to think about the whole pipeline. That will not fix the issue in our time in our current jobs, but it is the only way that we will address the gap that you talked about. The work that we are doing on skills will start to look at that in the next 12 months.

Alex Neil: Another problem, particularly among younger people, is the difference between the attractiveness of the private sector and that of the public sector. Many years ago, I worked in the Digital Equipment Corporation in the United States and Europe. Frankly, working in the private sector was much more exciting, and not just because the money was better—the scope for innovation, foreign travel, promotion, career progression and so on meant that it was just a much better place to be. As well as looking at the numbers, do we not need to do something to make working in the public sector sexier, if you like?

Caroline Gardner: You are right that the private sector probably is a more attractive place for lots of young IT graduates and workers, but it does not need to be. That is part of what the digital fellowship scheme and some of the other things that the Government is doing are trying to address. Morag Campsie can tell you a bit more about that.

Morag Campsie: In exhibit 6, we highlight that the Scottish Government could do more to sell the benefits of working in the public sector, such as the range of projects and the value that they can

add to the people of Scotland. There is also the flexible working arrangements that are in place across the public sector.

The Scottish Government recognises the issue and is considering how it can promote those things. The digital, data and technology profession framework, with its IT supplement, will help, because that is setting a clear career path for people. That will help to retain the staff who are there, because they will be able to see a clear path for themselves, and it will help to attract people from outside.

Alex Neil: Presumably, in relation to project management skills, we need people who are a bit more experienced and who know how to run and manage big projects. Do we need to do a lot of urgent headhunting around the world to get the right people to do that? The right project management is a key part of achieving all of those other objectives.

Caroline Gardner: Project management is one of the skills that we highlight as being critical and in which there is a shortage. The Government recognises that there can often be value in bringing in such skills from outside for a short-term, well-planned piece of work. When we see projects go wrong, it is often either because the project management expertise has not been there at all or because such expertise has been brought in to fill a very immediate gap, without any thought to how the skills and experience can be spread more widely so that people involved in the project can learn from it and go on to use that knowledge for another project or programme. There is something about being smarter that would incrementally help on all of this.

Alex Neil: It all comes back to the top management in the civil service.

Caroline Gardner: Leadership—yes.

Alex Neil: Do we have the right expertise at the right level in the civil service to make that happen?

Caroline Gardner: At the start of the session, we talked about the changes being made to the digital directorate and the assurance parts of the process. To an extent, that is still a work in progress, and we have got some really good skills coming in there. Gemma Diamond mentioned the Scottish approach to service design. Where we see that working well, it is having a real impact.

However, we also say in the report that the planning for the retiral of the chief information officer started too late and is still not complete. There are some key posts in here. The Government needs to be very clear about what the role is, how the role connects to the rest of the architecture in Government and how the Government will attract the right people who have

not just the technical skills but, as Gemma said, the cultural approach to working that can lift the whole boat on the investment that is being made. There is still work to do on that.

Alex Neil: Do we need to inject a bit more urgency into getting all of that done at that level much sooner? It seems to have taken an age. Even the title “information officer” is reminiscent of the 1940s rather than the 2020s.

Caroline Gardner: There are other plans under way.

Gemma Diamond: Absolutely. Instead of replacing the chief information officer with another chief information officer, the Government is looking at bringing in a chief technology officer. An interim chief technology officer is in place, whose role over the next few months is to scope out what the role would look like on a permanent basis. The Government will then need to recruit into that post. The Government is considering what it needs now, although, as the Auditor General has set out, it did not plan for that well enough in advance, when it knew about the retirement of the chief information officer.

The Convener: How does the Government expect to be able to recruit people to those posts when, as Alex Neil says, there are so few graduates coming out with the requisite skills?

Caroline Gardner: Morag Campsie touched on some of the things that the Government is doing, which includes bringing skills in through the digital fellowship scheme and the digital academy. There are initiatives there, but our view is that, given the centrality of digital to the Government, it needs to be scaling that up and looking back along the pipeline. If you want digital government, you need better digital skills than we currently have, and more of them.

The Convener: Is there a culture of being able to be honest about—I hesitate to use the word “failures”, because it is perhaps a bit too negative—the challenges of these projects? The discussion takes me back to when we took evidence from the Scottish Social Services Council on the £4.2 million that it spent on an IT project. We brought in the Government department that had sponsored the project and discovered that it had never set foot in the building of the SSSC. When Gemma Diamond talked about having the correct leadership, I was interested to know whether she meant chief executives. I do not suppose that we can expect the chief executive of every organisation to have the appropriate IT skills to be able to lead a project with the level of detail that is required. Are there enough skills in the sponsoring department of the Government? If a department is leading a big project, should it not go through the doors of the

organisation? Is there a culture of openness that would allow people to admit that things have gone wrong and share the experience?

Gemma Diamond: It is a really interesting question. What we bring out in the report is the role of the Scottish Government in more strategic leadership. We say that the Government has the unique role of being able to bring everybody across.

I talked earlier about culture. The chief executive of a public body can set the tone at the top and say, “This is important to us as an organisation. This matters. We want to be a modern organisation, use modern technology and provide the best services to users that we can. We want to use new approaches, such as the Scottish approach to service design.”

Sometimes, it is not about the chief executives having all the detailed skills, but about their setting the tone of the importance of digital. That is our expectation, and programmes such as the digital leaders programme are about getting leaders more switched on to what it takes to be a modern organisation and what their role is in that regard.

09:45

The Convener: Audit Scotland will do quality assurance on the work. Is it your expectation that an IT project’s sponsoring Government department, body or person of a project would visit the organisation that was undertaking the project and forge relationships and a culture of openness, or is it okay that they never set foot in it?

Caroline Gardner: As you know, the question of sponsorship has come up in a number of the reports that the committee has considered over the past year or so, and it is something that we are taking forward with the Government. From our perspective, sponsorship arrangements can work very well, but in some cases they really do not. We see a lot of variation in how they are carried out, including in the level of seniority of those in Government who are asked to carry out that role, the relationship and the amount of contact that they have with the body, and the extent to which they see themselves as supporters or critical friends. We will be continuing to work with the Government on those issues, and we may report back to the committee on that.

Bill Bowman (North East Scotland) (Con): Most of the questions that are on my list have probably been answered. When I look at your report, I see that the key messages are to the point. Even when you are being helpful to the Government, your comment ends with a “but” and there is something else for it still to do. We feel—I do not know whether you feel this, too—some

exasperation that we are reading the same things again.

Will you clarify who is responsible for the work on digital? You use the generic term “the Scottish Government” a lot, but on whose desk does that responsibility lie?

Caroline Gardner: The director general for organisational development and operations is the accountable officer for digital in the Government. That is a very clear accountability. More widely, the DG for health and social care, for example, has a responsibility for how digital in health is being developed. There is a clear line of accountability, but there are also shared leadership responsibilities.

Bill Bowman: So, it is not totally clear. You are saying that there is a direct line of accountability to a person. Where do they sit in the Government’s organigram?

Caroline Gardner: Directors general all report directly to the permanent secretary. That is the senior post.

Bill Bowman: Is that the individual to whom you are referring in key message 3, which says:

“it does not know how much public money is being invested across the public sector”.

Caroline Gardner: We would expect that group of directorates to have that knowledge, and that is where we would expect that work to be carried out.

Bill Bowman: Which group is that?

Caroline Gardner: Each director general is responsible for a group of directorates. There is a digital directorate that would carry out that work on behalf of the DG, and that is the line of accountability for it.

Bill Bowman: Which person should know the total investment?

Caroline Gardner: The DG for organisational development and operations.

Bill Bowman: Did you ask them what the total was?

Gemma Diamond: We discussed with the director general and the director of digital whether they knew what the level of investment was when the strategy went out, whether the baseline was in place and whether they had the right level of investment themselves to undertake that role.

Bill Bowman: Was there an awkwardness on their part as a result of their not knowing the amount?

Gemma Diamond: As part of the conversation, we acknowledged how difficult it was to know that. We are not saying that it is an easy thing—it

absolutely is not. Identifying IT spend and spend on wider digital activity is not easy to do, otherwise we would have been able to pull out a figure ourselves, and that is not something that we can do.

We explained to Government that we are not expecting to get a big spreadsheet that adds up to one number, but that we want an understanding of the overall level of investment that is required and whether the necessary resources are there at the moment—whether investment is available to push on with the ambitions in the strategy—or whether the current resources are tied up in simply keeping systems running.

Bill Bowman: I do not want to get too technical, but you used the word “investment”. To me, investment is something that adds value and that goes on to your balance sheet as an asset. Do you mean that, or do you just mean spending money to keep things going?

Gemma Diamond: It can mean both. It can mean money that is being spent to keep the lights on—and it is important to understand how much IT and digital spend is on doing that—but it can also mean investment in new things that create value.

Bill Bowman: We do not have that split either—we do not know what is adding value and what is just keeping the lights on.

Gemma Diamond: No, we do not.

Bill Bowman: It is a bit of a muddle, and we do not know whether it is a cheap or an expensive one.

Caroline Gardner: We think that, in order to make a reality of the Government’s digital strategy, that information is needed.

The Convener: As members have no further questions, I thank the panellists very much indeed for their evidence.

09:50

Meeting continued in private until 10:45.

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