Andrew Stott

Interviewed by

Ian Symonds

28th March 2019

At the

BCS London Office,
5 Southampton Street, London, WC2E 7HA
Kindly provided by BCS – The Chartered Institute for IT

Welcome to the Archives of Information Technology. It's the 28th of March 2019, and we're in the offices of the British Computer Society in London. I am Ian Symonds and I've been working in information technology and management consultancy since 1976, a period of enormous change in the industry.

[00:20]

Today I'm talking to Andrew Stott. Andrew is an international thought leader in open data. Most recently, between 2004 and 2010, as Deputy Chief Information Officer and then Director of Digital Engagement at the Cabinet Office, he delivered the globally leading data.gov.uk, in which a large number of government datasets were made available online for the first time. He has led UK Digital Engagement programmes, and is now an expert adviser, speaker and consultant on open data and e-government, both in the UK and worldwide. We'll be talking about Andrew's background influences, and some key events that shaped his career, and his views on the industry today.

[01:12]

So, Andrew, where and when were you born?

I was born in London in 1955. And have lived most of my life in the, in the London area or north-west Kent area.

OK. What about your parents, what were their occupations?

Well, my father was a civil engineer. He worked the first half of his career for Maunsell's, the international civil engineering consultancy, and he was a, he was the, the junior partner there. So, he got sent to Australia at short notice. I remember as a child him coming home and telling my mother he was off to Australia in the morning. And those were the days when it took four days to fly there, by propeller plane. And, he'd just disappear for two months. Because, you know, he went to sort out problems with projects there. And then, when I was eight he decided he had had enough of that lifestyle, and he became the last Chief Engineer of the London County Council. And, and so, as part of that became the first Chief Engineer of the Greater London Council, and was Director of Transportation in the Greater London Council for, ten years. And he then went on to be Director-General of the National Water Council in that period when the Water Council – the water industry, came out of municipal control and was

structured as businesses, but before it was privatised. And, then his final role, he was a Professor of Civil Engineering at King's College London.

OK. And did your mother work?

Not very much. Not very much. I mean, her life's work has been her two children I think.

[03:15]
And what was your family life like?

It was, it was quite quiet. I think my, my father had a, a lot of entertaining of people he dealt with as part of business, so, we didn't have many colleagues or those sorts of people coming to the house, you know, had a few, he had a few close friends, and we spent some time with them, either in London or long summers in Cornwall. When school holidays started we were sent down to Cornwall – we went, all went down to Cornwall, and then my father would come back for some of the weeks, while we remained down in Cornwall with my mother.

[04:10]
Mm. Fantastic. What would you say were the important influences on you in your early life?

I think, you know, looking back, my father and my grandfather. My grandfather was a gas engineer. He had been Chief Engineer of the South Eastern Gas Board. And he was… And he had been Chief Engineer at the Greenwich Gas Works where the Millennium Dome now is. And he was the chief engineer who led the Isle of Grain gasification project as well. So, it was a very sort of, logical sort of household. Things were quite well structured. There was quite a bit of, you know, modelling and, and those, and those sorts of things. A fair bit of walking. So, my grandfather liked to go walking to clear his head, and my father did as well.

In London, or?

Oh… No no. Mainly in London, you know, it was a morning walk from home type of thing. My father did, and I, and I've kept that habit as well.

[05:31]
OK. Can you just tell us, give us an overview of your education.

I was, started in a Kent primary school, and then, when my parents moved to Dulwich for my father to take up the LCC job I went to Dulwich College Preparatory School, and was there until I was thirteen. I, in the early days I had reports which said, he could go far if only his mathematics was better. By the end of preparatory school maths was my, you know, prime subject. I skipped a couple of years in that period of the educational system, one where I just sort of, just skipped a whole year at Dulwich Prep, and then, I got a scholarship to Westminster, and that actually meant I skipped a further year. So, at university I found two years below me the boy who had been sitting next to me in my first class at Dulwich Prep School who had gone to Dulwich College.

And did you do the accelerated route at Westminster as well, to A Levels?

No. No, I mean, by… I was, I had got a scholarship there, so, you know, everyone was sort of, bright there. But it was, it was, you know, just there for, for four years, two years for O Level and two years to A Level and, and university scholarship.

And what subjects did you study at secondary school?

Up to O Level, maths, physics, chemistry, English and Latin and French were all pretty well, you know, compulsory. I did German rather than Greek. And, for some reason I don't understand, I didn't do any history there, although sort of, history was, was all about. And, it was… I think, I think it was just how the timetable worked, couldn't do it, couldn't do history, and the other subjects I was doing.

[08:14]

And, so, I mean… I mean, you said just now that you found maths to be one of your strong subjects, even at primary school, so, by the time you got to choosing A Levels, that was the way presumably you chose to go.

That was the way, that was the way, that was the way to go. That was the way to go. I mean for, in those days, children really didn't do IT. But I did have some exposure there. I mean the first was, I had to wait a term to go to Westminster, partly because I was so young and it was just the sort of, order of scholarships. And, so I had to sit in the corner of the maths class. And, the maths teacher gave me a book on computers, and the importance of learning binary for that. And then at Westminster, Westminster was part of the Imperial College Schools Project, where they, the university funders had given Imperial College a computer, but part of the deal was that they had to run outreach use of the computer for schools. So they had a schools project, and the model was that, people would punch punch cards by hand, and post them in, and then they'd be run through the university computer, which was a pre-IBM 360 one, IBM 7094. And, then, the output would be posted back to them. And then, next week they'd punch cards. Now, being at Westminster, I could get to Imperial College on the Tube, and I also taught myself to type, so I could use a mechanised card punch and do corrections to my programs in the ten minutes between the output of the previous run coming back and the shutter coming down on the next run. So… And, I, you know, it was my account that was the most heavily used account [laughs], on, on Imperial College's Schools Project.

And what age were you when you were doing this?

This was thirteen and fourteen. So…

That's… I mean, I guess at the time, that was quite unusual to have, have that sort of computer experience.

I think it, it was. It was. I mean, it was unusual even at Westminster.

Yeah. Yeah. Yeah. I mean I can remember doing that thing about posting your program on cards into a letterbox, even when I was in the first year actually, in my own education.

Right.

[11:09]
So, you were very lucky by the sound of it. You went on to, you left Westminster and you went to Clare College, Cambridge.

That's right.

And, you did an interesting combination of subjects.

Well I did two years of maths. And, I was doing, pretty well at maths by external standards then, so I got a First in each year's exams. But, maths has a sort of long head. So, I was good but not very good. And you know, I could see people far ahead in the race. And I also started to get a bit concerned about what I would do with this, particularly as, as I was increasingly able to choose which parts of maths to study. As you go, go through the maths course, you can, you can specialise more and more. So it was getting purer and purer maths. And, in those days the bit that I really enjoyed doing, and was best at, I didn't know any application for it. And, no one from GCHQ came and tapped me on the shoulder. Because in those days cryptography, you know, group theory and number theory and all those sorts of things. So in those days all that was tremendously secret. And I clearly wasn't good enough to be tapped on the shoulder for that. So I couldn't work out what to, you know, what I'd do. So, after my second year of maths I sort of looked around for what to do, and, I looked at doing computer science, which in those days was a one-year course. But I had already been to most of the lectures, you know, out of interest. So, I thought that would be a bit self-indulgent. Economics did a one-year course, but they didn't really believe people could learn economics in a year. And, so people hadn't done very well transitioning. But the law faculty had a scheme geared at people who had gone up to study English and history, and had a crisis after the second year, wondering what they were going to do. So, they had a one and a bit years, which got you an exception from Part I of the

Law Society exams, and essentially Part I of the Bar exams. You had to do a further summer course to get the exception from the Bar exams. So I signed up to do that. And it was very interesting. And, you know, in some ways a bit like maths, you know, it's a logical system, but, it uses words rather than symbols. And there was a lot of argument. And, memory is more important in law as well. So, I didn't do quite as well in law, because my memory just couldn't, I could only remember cases with interesting facts, rather than ones that had the most important points of law in them. And, so that got me a 2:1 in Law at the end of that course. And the wonder of the Cambridge system is that as long as you pass a different exam every year, you end up with a, with a degree.

[14:38]
And did you consider an academic career? Because you did very well in your, as an undergraduate.

No, I hadn't really thought of an academic career. I had, as one does in one's final year at university, sort of, started to worry about what was I was going to do. I put a number of irons in the fire, one of which was to go and do a master's in computer science, which was then called the Diploma. And, I actually got a grant to do that, that arrived on the same day as the job offer from the Civil Service, which, and the Civil Service scheme in those days, it took a year to process you. And you had to apply, and then there was a qualifying exam, and then there was Civil Service Selection Board, and then final interviews, and, then, you know, it finally came. And I decided, you know, that, I didn't want to have a career in computers; what I wanted to do was join the Civil Service, because I thought it would be intellectually interesting. So, I joined the Civil Service. And of course the first posting, Central Computer Agency.

[15:51]
Just before we get…

Yes.

…get onto the detail of that. I mean, what were your, what were your enthusiasms and interests outside education at this age? Did you have any, you know…

Not a lot. Not a… I mean there was… I was in the Boat Club at university. Listened to classical music, but, I didn't play an instrument, or, you know, do anything particularly, particularly unusual in those times.

OK.

I mean during the university vacations I, I worked doing sort of mathematical analysis type IT for transportation firms, one in the US and one in, one in the UK.

OK, that must have been great experience for you.

That, that was great experience in sort of working life.

Yes.

And particularly being treated as a, a professional, you know, in that sense. So that was quite interesting.

Fantastic. Yes.

Yes.

[17:02]
And, what was your relationship like with your teachers and tutors?

Not particularly close. I mean, sort of, functional I think would be a description. I still come across them when I go back to the college, and, it's still just about going.

OK. It didn't impede your progress, so that obviously wasn't an issue. [laughs]

No, no, no.

Were there any other important influences on you at this time?

I don't think… I don't think so. I just sort of, went through, went through the machine there.

[17:40]
And how… I mean, of the two subjects you majored in, maths and law, have they both been useful to you in your career, or, which has been more useful?

I think the, the law has been, probably more useful in that, I mean the Civil Service model is that, in the UK, and which is different from other countries, that, you know, the lawyers are on tap rather than on top. But knowing the basic principles of the law, particularly when you need to call for a, particularly when you need to call for a lawyer, has been, has been useful. I mean I, I suppose I was, I was best at criminal and constitutional law, so, the criminal I haven't had to use very much, but the constitutional I have, and, you know, a good grounding in contract law as well, which came, became useful when I got involved in Government IT.

[18:49]
Did you form any friendships during education that have been useful to you later in life?

Not really. Not really. [pause] I have very few friends going back that, that far. I'm in touch with, half a dozen people from my university year, but, largely as, on Christmas card terms. And, a couple of people from Westminster, and that's, that's about it.

OK. Were there any particular events during this time that shaped you, do you think?

[pause] I think the, I think the Civil Service got particularly interesting because, doing the conversion course to read law, it was a time of the trial of the Crossman Diaries, where Richard Crossman had been a minister in Wilson's government in the 1960s, had kept extensive diaries of how the Government worked. And, it was, and it

was after his death, and it was proposed to publish these. And the Government sued to stop this. And, each day our law conversion course would start with, you know, the arguments the previous day, commenting on these. But when the diaries came out, I just read these avidly, and, it's a very rich picture of how, in those days, Government and the Civil Service worked. So, so that was quite influential in making me interested in what happened within Government.

And did it change a lot during your career?

It certainly changed with the Blair government. So, it got on to sort of, sofa government, and continued with, with Cameron, so…

Maybe we'll come on to that later, when we get to that stage, and, you can tell us more.

Yes.

[21:08]
OK, so, presumably when you, you were interviewed for the Civil Service, you got offered a place in the Civil Service.

Yes.

And that was immediately going onto the fast-track route?

The fast-track trainee scheme, yes.

Yes. So just tell us a little bit for those who don't know, who may be listening to this, what that means in practice.

It's designed as a graduate entry scheme with an accelerated route to a grade called Principal. So that's four or five years to Principal, and designed that, most future members of the Senior Civil Service would have come through the administration and trainee scheme called, called the Fast Stream. A bit controversial, in that it's seen as

self-selecting, it's extremely competitive to, to get in, and it's a barrage of written tests, you know, some of the intelligence, you know, intelligence test variety, and some of, actually, you know, writing stuff under pressure, and group and individual exercises in a selection, you know, what's now called a selection centre. And, and then, the first few years, each year you do a different posting in a variety of different roles, subjects, and in my case, because I was in what's now the Cabinet Office, one of those roles was outside the Cabinet Office.

So, in essence, the Cabinet Office was your home department during this time then.

Yes, it was called the Civil, it was called the Civil Service Department in those days. Because it was the days after the management of the Civil Service had been split off from the Treasury. So the Treasury used to have two parts, one of which was the finance, economics bit, and one, one actually ran the machine of government, and the Civil Service Department was that second part of the Treasury.

Mhm. But then you got, you got posted out to other, other departments.

One of my postings was, was there.

[23:47]
Yes. And I believe your, this was probably your first one, was in, what was then called the Central Computing Agency.

That's right.

Just tell us a little bit about that. I mean, what it did.

The Central Computer Agency was set up in, I think 1972, 1971, 1972, out of Management Services (Computers) in the Civil Service Department, and prior to that the Treasury, to bring together a number of functions concerned with the Government's use of computers for administrative purposes. So it didn't, didn't cover very much of scientific computing, or, if you like, warlike military computing. And it had a sort of, advice, it had a section that looked at individual department, ministerial,

ministry projects, called C1, It had a policy section called C2, which I was in. It had a technical section called C3, who were largely concerned with validation of the then, just coming on stream, ICL 2900 range. It had a section called C4 in Norwich, who did all the contracting for computers. And in those days the CCA actually bought all the computers in Government, and paid for them. And, so, it was accountable when projects went wrong, because it had spent the money on the computer. C5 was, did telephones and telecommunication. And C6 was a small stable of consultants, normally people who had extensive experience in IT in the private sector, who then went in and gave specific advice on individual ministries' projects.

[26:15]
OK. And, you were involved in, and this is, you know, very early in your career, in the Watson review.

That's right.

ADP as it was then known.

Automatic data processing. Yes.

Tell us a little bit about that and what that was looking at.

That was… The CCA in those days was run by Reay Atkinson, and, they… but it was decided to have a review of where automatic data processing was going in Government, and what the longer-term implications would be, and what structural issues needed to be, be addressed. So it wasn't, wasn't very technological; it was more, how is the increasing use of computers impacting on the Civil Service, are the current arrangements for budgeting for computers appropriate. I think Sir John Herbecq, who was the Permanent Secretary involved, was rather fed up of having to appear before the Public Accounts Committee, and answer for the failings of other ministries in their IT projects. Because he had actually spent the money on the computer that they were using. And we were starting also to look at the new forms of computers coming along, so as part of that project, my name is on the purchase order for the first microcomputer bought for the British Government.

[28:13]
And what was that, as a matter of interest?

[pause] I… I think it was the, South West, South Western Digital Products, 6800 CPU, but not nearly powerful enough to actually self-compile programs. So, it became a company with a PDP-11, that ran across compiler. And the killer application was to be a file control, file indexing, and, what we would now call electronic records management. And, we failed, completely failed in that, and the project still isn't, the… that isn't, still isn't really licked as a problem.

OK.

But, you know, in those days, the Government had lots of files, and index cards for files. So it was seen as, you know, that's something that can be computerised, and, it looked fairly standardised across the Civil Service, so, you could do it like, like that. And in the, in the report I wrote something about, you know, in the far distant future one could imagine that individual offices might have individual terminals on their desks, and they might even do their own typing, and the report then worried about redundancies in typing pools and, and the like.

[30:00]
And why did the project fail then, just out of interest?

I think, it was that, what looked like a standard business requirement, wasn't.

Across the various departments.

Yes. And everyone had their own way of doing this.

Yes. OK.

And it was under power for the time. It was difficult to make such a computer multi-user, you know, so, you know, once you got two filing clerks, then you're in trouble.

OK. Actually, things don't change really. You still get a mix of these technical and change management issues don't in…

Yeah, and you still, you still find lots of little systems, actually somebody's spreadsheet used as a little database. And it can't be scaled, or replicated.

[30:55]
So, in… I mean you were sent on a number of assignments…

Yes.

…as part of this fast-track process. What, what sort of things did you do in those roles? I mean, you've told us about this one. But was there a, was there anything common about them, were there…?

No. I think, they were looking at the main sorts of roles that administrative, senior administrative civil servants did. So, they, I was sent to the CCA, not so much about computers, but because it was about, thinking about policy in a technical area, that you didn't… So don't get into the technology; think about, you know, what the policy organisational impact of this was. Another job was in expenditure control. And, the third one was in, in what we now call HR, in terms of great structures and manpower, manpower planning and the like. And then I ended up in the Rayner Unit Number 10, doing, overseeing the programme of efficiency studies for then Sir Derek Rayner, who was Margaret Thatcher's efficiency guru, portrayed as Sir Mark Spencer in *Yes, Minister*. Because he was actually the Managing Director of Marks & Spencer's in those days. [laughs] Famously said, 'These people don't ask you for a drink because they think you are thirsty.' [both laugh]

[32:51]
And did you get any vocational training during this time?

There was… Yes. And in those days, the Civil Service used to take the training very seriously. And, there were, there was a ten-week course every year, so between

assignments you did a, a ten-week course with, and the first one had four weeks of economics, and manpower planning, and, quite a lot of sort of, constitutional and Parliament And a hilarious day on computers, [laughs] with a slide, you know, this is a computer, which didn't, didn't, I don't think helped anyone. I mean I, I found it hilarious, but, I don't think my colleagues benefited from it at all.

[33:51]
And, did your early managers at this time, were they influential on your career?

Yeah, I think… [pause] Reay Atkinson was pretty, pretty unflappable. Very sort of, nice to people at all, at all levels. Gerald Watson really, really driving. He was sort of, more of a sort of generalist civil servant, moving up quickly, you know, but just how to turn things out quickly and accurately, and how to forge some sort of position that everyone would buy into, but wasn't, if you like, the lowest common denominator. So, very good political skills. Not… I didn't have that much contact with ministers. The Civil Service Department did have ministers, but in those days, but it wasn't really until I was at, in the Rayner Unit that they started to see much more of ministers.

[35:25]
In 1985 you, I think you moved on to become IT Director of the Prison Service?

That's right. I was… They… I had been in the Rayner Unit, Efficiency Unit, for four years then. And, Derek Rayner had moved on and Sir Robin Ibbs from ICI, he was Harvey-Jones's number two, was the efficiency adviser. And, he, after four years he sort of, wrote in my annual report that, you know, I had advised on things for too long, or long enough, and now I needed to run something for real. So my name was put on the transfer list, and I had received a proposal from Eric Caines, who was then head of finance and personnel at the Prison Service, on loan from Social Security, which is where, later Social Security comes in, to go and be their first Director of IT. And, Eric had a sort of vision that the Prison Service should be making use of IT, and in fact it had almost no IT itself, but it relied on the Home Office automatic data processing unit in Bootle, Liverpool, and tended to be a poor relation of other Home Office services. So, the Police National Computer Unit had been set up, and they

were starting to become independent, but, he felt the Prison Service was under the dead hand of central Home Office.

And did you go in there with some sort of mission?

So I went in, I went on a mission to get things, get things moving. And, they… And, and that's what I did. So… And, I think we, we started by wanting to have what we called a central inmate database. So, there was an existing statistical system that kept records of prisoners for statistical purposes, but it didn't help governors manage prisoners, it didn't, didn't help the operational side. And, so, Eric had a vision of terminals in each prison, and some central computer. And we pushed a project to, he was, he was pushing a project to do that, but eventually the dead hand of central Home Office just made that too bureaucratic and difficult for him. So, we did a, we did a sort of, under the radar solution with microcomputers, which were beneath a purchasing threshold, and the people in Bootle didn't believe these were anything more than toys. And we designed a simple database system, based on a model of a, something that a principal officer at Wandsworth had done on an early IBM PC, you know, floppy disks. And we had it properly engineered, you know, in terms of a system, so it could be, wouldn't need IT staff in the prison to support it.

Mm.

And it was an absolute wow. That, it was simple to use, and all sorts of staff could use it, so governor grades, administrative grades, and prison officers. And they, they innovated ways of, of doing it. So you know, look at the religions of the prisoners that are in to, to allow you to work out what food to order. And do things like that. And, they could, you know, they could search and sort prisoners, and sort out transfers that way. So, it had a lot of enthusiasm from the Prison Service.

Was this networked?

No, not, not at that stage.

Was there a Government network to piggyback on at that time?

No. No, nothing. Nothing there. But it did have the ability to produce both paper reports and output files on removable media, that then you could send to the, the centre. And, it was, it was popular. It had a lot of support from the Prison Officers' Association, who were notoriously resistant to change in the prisons. But one of the, I think the key thing for them, they saw it as getting prison officers equipped as police were becoming equipped with, with computers. So it was about, you know, professional standing, that you got computers.
[41:15]
And then after two years of that, Eric Caines was recalled to Social Security, to sort out the computerisation of the Social Security system. And within three months the offer to follow him had just become too good to refuse.

And you ended up in the Department of Social Security and DWP as it then became for, sixteen years or so.

Sixteen or seventeen years, yes.

Yes. Yes. So, tell us a bit about that, and…

Well I think the first, the first role, and this was for four years, was the Social Security operational strategy. And they, there had been a sorry history of trying to computerise the work in Social Security local offices. So, pensions had been computerised into a batch system that ran at Newcastle, but things like Income Support, called Incapability Benefit in those days, were run out local offices. And, they were entirely manual, paper-based systems. There had been at least two attempts to computerise these in the past, one of which was called CAMELOT, which I think stood for Computer-Assisted Mechanisation of Local Office Tasks. And that had been a disaster in full Public Accounts Committee mode. And Eric Caines had been the director of the regional organisation, the local office network, in Social Security, who felt the IT people had just, you know, completely failed to deliver for him. So, so he had baggage that way.
[43:35]

And after a few years to sort of, think about it, the Department of Social Security, Health and Social Security in those days, had launched something called the Social Security Operational Strategy, which was another go at computerising the system. And that had been running for four years, and nothing had been delivered. There was a building in, near Fleet Street – no, just, nearer Holborn, nearer Holborn. We were disturbed several times a day by Robert Maxwell's helicopter taking off and landing on the *Mirror* building next door. And it had a IBM mainframe in the basement that, its sole task was the run the project PERT network, so, it had this enormous network that, all carefully planned and the like. And it was like the computer in *Billion Dollar Brain*, that, everyone was lying to it about progress. So, after four years nothing had been developed. And, the guy in charge left and Eric Caines was recalled from the Prison Service to sort of, sort this out. And I was brought in, brought in to, initially, sort out the vendors, and the systems integration, and that then grew into the infrastructure roll-out, and then setting up the service delivery organisation. So, Philip Dunne, who was my opposite number, did all the applications, and I did the infrastructure, vendors, and, and service delivery. And, it was, Eric ran it, at an enormous pace. Failure was not an option. Adherence to rules wasn't the first priority. And, it was a matter of, you know, getting, getting the job done. And, it was, it was done, and, remarkably quickly, when that was, that was the, you know, that was the task, and, so planning was simplified, project structure was simplified, and, a lot of, you know, blockages were, were addressed.

[46:52]
And how did you find the role? Because I mean, this was, by the sound of it, this was the first chunky bit of sort of, implementation/delivery you'd done.

Well I had run, you know, I had run, I had run Prison Service IT, so I had about 50 people, you know.

Yes.

Suddenly I had, well when I moved in I had 500 people. And, I think when I, when I left, I had over 2,000. I mean you know, taken on, you know, various bits.

Was this a learning experience?

So this was, this was a learning experience. And, you know, it was the first, it was the first time when I had had to run things that, you know, not only didn't I have the skills to do it myself, but I didn't actually fully understand what it was that was being done. And, so it was, you know, learning how to trust people, how to give direction and decision, on things that you don't really understand.

Yes. Knowing how to ask the right question I suppose.

Ask the right question, you know, and keep asking the, the right question. Seeing, you know, thinking about what the back-up is, you know, so, what do we do if this doesn't happen?

Mm.

And, in the… And often, thinking about, don't do things in the cheapest or most elegant way, but do them in what's going to be the simplest and most robust way.

Mm.

So, I remember on, you know, some, something to do with networking, you know, there's all sorts of discussion, how much to make this more resilient? And I said, well why don't we just install two of them? It's not material on the overall budget, and we'll, you know, we'll add complexity, spend a lot of money, and more importantly, time, working out a single highly resilient solution, when, you know, we can afford just to have two of them, and, and ensure there isn't some awful failure.

So this is kind of, before the days of formal business continuity planning I assume, which would have presumably looked at that in a…

I think it was… I mean… In a…

…structured way.

Yes. I mean, a lot, a lot of, you know, what we now think of, we were inventing as we went along. A lot of, a lot of what's in ITAL for instance, you know, didn't exist then. We were, we were working through from first principles. I think I, you know, I was guided by a number of things, one of which was, you know, NASA Apollo programme, and, you know, including, you know, the authority of flight directors. So, you know, the night shift manager, you know, just had authority to do almost anything to get, to make sure the service was running the next, the next morning. Getting people to, you know, write down contingency plans. So, if this happens, what do we do? Have the sort of, service improved. I had also worked in the Efficiency Unit at BBC External Services, and they had some bits of culture, you know, that, if something goes wrong, you know, in the BBC in those days, it was, you know, it was reviewed, not to point fingers, but what do we learn so this doesn't happen again? So that sort of approach to quality.

Yes.

And getting every day a review of how the day had gone, what do we learn, what do we learn on this?

[50:52]
Mm. So, what were your other achievements while you were at DSS/DWP?

I, after I… After the operational strategy was, roll-out was well under way, and, the IT Services Agency had been set up, I then went to do a policy job on benefits for the unemployed and European issues in Social Security, in London. Then I went to be Director of Strategy at the Benefits Agency when it was set up. So, you know, thinking about service transformation there. Yes, a bit of IT strategy there, but also sort of, organisational strategy and the location strategy. Quite a lot of work there. [pause] Think… Separating out front office from back office, which was, turned out to be key in getting Social Security services delivered better in London, where it's difficult to recruit and retain staff. So a lot of the back office processing we moved to what we now call contact centres in the North West and one in Northern Ireland, and integrated telephone system and IT to make that all work together.

[52:41]
Then I was four years as, in Social Security finance, on the Social Security policy side. No. So policy finance, so, the finance officer for, in those days £100 billion of public expenditure. And, that also meant that I was the right-hand man for Harriet Harman and Alistair Darling, in terms of Social Security policy. Social Security policy is largely about, what money gets spent on who. So, the Department of Social Security had a pensions section, poverty section, families section, and incapacity section, and how, the balance between, ultimately the Secretary of State needed to decide priorities between those. And, so it's all about money. My finance role was actually the scorekeeper on that, and setting out what the options were. And also, you know, a lot of negotiation with the Treasury and the like.

Yes.

And I worked particularly closely with Alistair Darling, when he was Secretary of State, and, so I was his person to go to for the machinery of government discussions that led to the formation of the Department for Work and Pensions. And indeed I invented the name Department for Work and Pensions, because it's, trip off the tongue, so much better than the Department of Employment and Retirement. [laughs]

[54:30]
Well given that this is for Archives of IT, so we'll focus on some of the IT stuff.

Yes.

I mean you eventually became… I don't know if I'm jumping too far here, but you eventually became Director of Digital Infrastructure at…

That, that's right. That was, after the 2001 Election, the formation of DWP. And, I sort of, looped back to go to do the infrastructure job, again, in then DWP IT, which had grown, so it was then a, the next, the next big thing, and was rolling out a new desktop, networking desktop, for the whole enlarged DWP. And, that was in, that project was in trouble. So it was largely sorting out that, that project. It was also the start of e-government. So… And there was a project to allow Child Benefit to be

paid online, so it was getting that developed. It was also, you know, the start of the intranet.

Mm.

So, it was, it was getting the, the departmental intranet built, and learning some of the dos and don'ts about that.

[56:20]
Mhm. So… And then, perhaps moving on, you eventually moved on to the DfT, Department for Transport.

That's right. So, I went, I went there to be the Modernisation Director for the, driver and vehicle group, Driver, Vehicle and Operator Group, at DfT. So, those are essentially the agencies that deal with drivers and vehicles, so DVLA, Driving Standards Agency, Vehicle Services Agency, VOSA, and, there's a small one which does technical standards, type approval for, for vehicles. And, the issues there that, no joining up between those agencies. So, if you were dealing with your… As a, as a driver, you needed to deal both with the Driving Standards Agency for tests, and with the Driver and Vehicle Licensing Agency for your licence. If you had a vehicle, you needed to deal with VOSA land for your MOT, and the vehicle part of DVLA.

So this was more, this was about becoming more customer-focused.

So it's getting, customer focus was what it was all about. Indeed in those days, looking back within DVLA, which was all in this enormous 20-storey tower in Swansea. The bottom half of the tower was drivers, and the top half of the tower was vehicles. And they didn't talk to one another. And indeed there were whole different tribes. And so, it was getting that, that joining up. And again, then, also, e-government. So, we built the first Car Tax online, which for a long time, even if isn't still, was the only government online transaction people would recommend to their friends. And I remember going in to the Permanent Secretary to demonstrate this on his car, and him saying that, 'It isn't going to work, this isn't going to work.' And within three minutes he had paid his Car Tax. And, that was, you know, very

successful, you know, meant that you didn't have to, you didn't have to go and queue in the Post Office. So there was a gain as far as the customer was concerned. But it was also an early example of actually the power of using the data that the organisation had got.

Mm.

So, when the system started… Part of the building of a system had been convincing the insurance companies to supply data about what insurance policies they, motor insurance policies they'd issue, and, also, VOSA getting garages doing MOT tests to record their data electronically. And, you know, to this day, when you get your renewal notice from DVLA for your Car Tax, you're not given the option of doing it online, because DVLA has already got the data that will allow this to go through. If it hasn't got the data, you had a different letter which says, go down to the Post Office with your certificates.

Mm.

But, you know… So, behind, what looks to be a highly customer-focused, simple transaction, is actually driven by collecting the data that would be otherwise on the, on the bits of paper.

Did all of this come together during this period when…

This was, this was in my, in my time in the driver and vehicle group, yes. Doing, just, finding… I mean, some people had been working on this for a long time, but actually, you know, pushing it out through, pushing it out through the door, was, was in my time.

[1:01:28]
Yes. And this was all part… I mean, your role was called modernisation director. I think I'm right in saying that the sort of, government strategy if you call it that, was called Modernising Government at that time, wasn't it? Is that right? I think, in one of the early parts of the Labour, the Labour government.

The… In that 2001-2005 period, there was a lot of money for e-government. So the Office of the e-Envoy had been set up.

Yes, that's right. Yes, yes.

So, a fair bit of this was actually funded from that central earmarked funding. And… [pause] But, at the time we did it, not, very little else had happened in terms of putting transactions online. A lot of information, people… Ministers were starting to get websites, but, they were just informational.

[1:02:35]
So was this, I mean… I mean, in the light of your later career, which we'll be coming on to in a moment, I mean, data, it's all about data isn't it.

Yes.

Was this when, if you like, you first kind of, saw the power of, of data?

I think… I, I think it was… No, I think the power of data, we had seen a, was very conscious of in Social Security, and the, the value of the data beyond the transaction that it had been initially collected for. So, there were bits of Social Security policy that, actually we did the policy so it could be driven by data. So, things like, the pensioner, the Winter Fuel Payment, Gordon Brown's Winter Fuel Payment, for, he wanted it, a certain amount for each pensioner household, and pensioner household was not data that the DWP held. Because all it held was pensioner accounts.

Yes.

But, we had the, we actually drafted the law so that we could determine eligibility by data matching, rather than by requiring people to apply. And, and even more importantly, a data match was definitive unless someone explicitly told us otherwise. So that if we had wrongly paid as a result of the data match, we didn't have to go and collect that money before the pensioner was allowed to be buried. Almost, almost

literally, you know, because, if the Government's overpaid, it has a legal duty to try and recover the payment. But we had structured the law so that data match, so it was driven by data matching. So if the data, if there was a data match, and we had no better information, it was a legal payment.

OK.

[1:04:54]
I think the, the… [pause] I think the thing that, in the DfT driver and vehicle group at that time was that they were very driven by the end user, the citizen, experience. And one of, one of the differences between Social Security and driver and vehicle land in terms of how systems and processes were approached was that, the only benefit that people working in Social Security would have contact with was Child Benefit. And that, you claim once when the child is born, and then basically you're paid for sixteen years. So, so that there was not much hassle associated with that. In DVLA land, everybody, you know, got a car, they'd got a driving licence, they've got their tale about dealing with their own bureaucracy. So, people are very conscious of what it looks like to, to the end users there, the citizens, is using. So it was much more focused on customer service than DWP, or was at that time.

[1:06:27]
OK. OK, let's move on a bit. Your next role was, you moved back to the Cabinet Office.

I moved back to the Cabinet Office.

And, you became, Deputy Government…

Deputy Government CIO. Yes.

Chief Information Officer.

So…

How did that come about?

That happened that… Blair had, in the early days had set up the Office of the e-Envoy, initially under Alex Allan, and then for four years under Andrew Pinder. And, it had been decided that, that unit needed to be transformed from, to be less of a, if you like, an advocacy unit, and more about the strategy and management of e-government. So it was reborn as the e-Government Unit, and they recruited… And, and it was seen as, it would be headed by somebody who would essentially be the Government CIO; CIO roles were starting to emerge there. And, they recruited Ian Watmore, who had been the head of Andersen Consulting in the UK. He had, I think, taken a personal decision that, a bit like my father, in a previous generation, that, there came a point in life when you had got enough money, and you didn't like flying across the world at a moment's notice, and, certainly Andersen Consulting had an enormous travel habit. And so he wanted a, you know, a stable job in the, in the UK. And so he applied and got this e-Government Unit, head of the e-Government Unit, Government CIO role. And, although he had a lot of dealings with Government, he wanted somebody to be his deputy who knew government and the workings of government, and would be the sort of, rear end of the pantomime horse. And, Ian Watmore had actually been my opposite number in Andersen Consulting when they were assisting with the Social Security operational strategy, fifteen, 20 years previously. And I had, you know, kept in touch as one does. So, I…

So you had a good working relationship.

So I… So when the appointment was announced, you know, I pinged him, you know, 'Congratulations,' you know, I, 'I hadn't dared hope it would be someone as good as you.' And I immediately got a ping back saying, you know, 'We must talk, tomorrow.' And, so, he wanted me to go across and be his deputy, and Stephen Hickey at the DfT, who agreed with some reluctance that I should go and do this, because he saw it as a, an outstanding opportunity for me.

[1:10:02]
Good. Yup. And… And this was at a time as well when each government department started getting its own, well they started calling them CIOs didn't they?

Well we, we deliberately did that, you know, and, you know, the early act was that, each department should have a CIO, and these would be the characteristics of the CIO. So, a CIO would not be just a rechristened IT director.

Yes.

You know, so… And there was a bit of back and forth with some permanent secretaries on this, you know. And, CIO, they've got be on, they've got to be on the board, they've got to be able to influence the business as well as deliver the, the IT. Yeah. And, not I think 100 per cent in that. I think in some of the smaller, smaller departments, we ended up with someone who was awfully like an IT director. But that was, that, that was the, the move there. And particularly to, with a vision of getting the CIOs to play more of a role in the design of business transformation.

Mm.

Because I think, I think the, the issue by that time was that, government IT project failures were no longer hitting because a fundamental limit in technology had been hit; they were about, you know, lack of organisation, planning, project management, and particularly, not carrying through business change.

Mm.

So, appointing a CIO is all the theme of transformational government.

Right.

It's about actually getting business change, and what we now call digital by default, or, you know, designing, designing your business processes, redesigning your business processes.

Right. And transformational government as well was when, I think shared services became quite a thing..

They did. I…

Yes, that was part of that strategy, wasn't it?

It was. It was. I wasn't so closely involved in that. Ian brought in someone else on the shared services side, whose name I can't remember, and Katie Davies, who had been in Accenture with, more to do the HR side. So, I did, I tended to do the technology and the, and the business process transformation side.

[1:12:50]
Mm. And at this time, I mean, the e-government office, Office of the CIO I think it was called, wasn't it, do you have any, did you have any financial control over IT in government departments, or at this time was it still, were you still working by influence?

This was largely by influence. It wasn't until, 2010, and the arrival of Francis Maude, and…

Government Digital Service…

Oh, I think… I mean, it was prior to the Government Digital Service as we now know it. But one of the first things Francis Maude did was to, when he found out that individual departments had delegated authority to approve their own IT projects, he said, 'Well, where is this delegation given to them, and who can cancel it?' And, so with some reluctance people found this, where this delegation was, in a Treasury regulation, and he cancelled it. So that, projects that were over a certain size had to come to him for approval, which would include conformance with standards in the direction that he wanted to, to go. And then, now there's a GDS. That's where GDS initially rather hostilely would approve or reject projects. Now, you know, departments know that working with GDS before you submit things for approval, is the good thing to do.

[1:14:57]

I think at that time some fairly major projects were put under scrutiny, weren't they, and some indeed were cancelled.

I think…

This is where the coalition government came in I think.

Yes. I mean, there was… [pause] I think there was… There was certainly a Francis Maude concern that too much was being spent with a small number of suppliers who weren't actually delivering a quality product. So, it was about, you know, more use of cloud, more use of agile technologies, more use of open source, you know. So those, those sorts of things.

[1:15:48]
So… I mean… Maybe we've jumped ahead a little bit here, but, in terms of your role in the Office of the CIO, what were your key achievements do you think during that period, up to, up to when the coalition government came in?

Well, I mean I wasn't, I wasn't in that… I did that role until, early 2009, and then moved to the, what became the Director of Digital Engagement role. Transformational Government, quite a lot of sorting out of relationships between vendors and individual ministries, and a more structured and strategic approach to the management of vendors. And, you know, so, started to look about how individual major vendors were interacting with different ministries and comparing and contrasting. Having a mechanism to start managing the risk of over-dependence on one vendor across, across Government. So… And, and trying to, I think, in some ways succeeding in getting some dialogue with vendors about how to be more market-attuned in government procurement.
[1:17:44]
It was also a time when the first steps were taken towards government cloud. So, thinking about how the Government could engage with cloud technologies and the cloud marketplace; getting a handle on the existing data centre estate; getting a mechanism for getting some common technical policies across Government. And, I think more, as part of that, getting a connection between those who set government

standards and those who consume them in departments. So a variety of, a variety of stuff there.

[1:18:52]
So, as you said just now, you spent five years as Deputy CIO.

Yup.

And then, a new role was created, Director for Digital Engagement.

Yup.

Was this still under the… This was still… Yeah, this was still under the, the Labour government, was it?

It was under the Labour government, and this was particularly in the time of Tom Watson, who was the, you know, the first minister to blog, the first minister to tweet, and, very much into this sort of, new digital stuff. And, this had started in 2007, when my colleague William Perrin, who had been at Number 10, came to me and said, 'There's something, there's something going on in social media, and the Government needs to think about this.' And, we had a study done by, two people, and, I can't remember who… Ed somebody was one of them, the National Consumer Council I think. And, the other was Tom Steinberg, of mySociety. And it produced a report called the 'Power of Information' report. And, this was largely about social media and online interactions in government policy. So, its basic thesis was, there's something starting to happen; citizens are taking part in it; and the Government, you know, not, not only is the Government not taking part, but the Government's not aware it's going on.

Mm.

And there was a sort of, made some recommendations of what should be done. And also in there was, and this was Tom Steinberg's thing, that the Government had lots of interesting data, and if made available, if you made that data available to other people

to use, then it would, you know, interesting things would, would happen. And I think very much in terms of civil society, community type applications. And, this report was produced. The Government accepted it, without too much thought about it, and, said, yes, we ought to do something in this area. But, there wasn't funding and resources, much ministerial interest. Until Tom Watson arrived as the junior minister in the Cabinet Office. And, Tom Watson was very close to Tom Steinberg. So Tom Watson came in and said, you know, 'Where's the "Power of Information" report, and what's being done on it?' And, there was a, something called the Power of Information Taskforce, where a number of people, some of whom were, you know, people Tom Watson had been dealing with, were brought in and formed a taskforce to sort of try and get a way forward. And we had a competition called Show Us A Better Way, of trying to get some ideas of what Government data should be released, and, what could it be used for? And, this led to… And I sort of advised Tom Watson that, you know, to get this… You know, nothing really gets done in Government unless there's somebody to do it. And if you really want to get this done, you've got to create a role and a, and, you know, people to, to do it. And, this isn't really an IT issue; this is really a sort of, government communication type of issue. So, Tom Watson bought into this, and set up a recruitment for a director of digital engagement. And… And Tom trusted me, and insisted I was on the selection panel for this. And in the best traditions of these things, you know, you interview all the candidates, and none of them quite make the mark. And then the Government is in a, sort of, the organisation is in a, is in a, bind. And, there was a bit of toing and froing, and I got offered the, the job. Which I decided to take, on the basis that I had done five years in the IT role, I was due for a bit of a change. This looked interesting. And, I thought it might be, you know, harmless, a bit of, parking, after, after a period of, you know, hard work.

Mm.

[1:25:05]
So, I accepted the job. And, on the first day formally in the job, I had got back from a walking holiday in the Lake District, and, I had a message from my deputy I had taken with me from the CIO organisation saying, 'There's this request from the Prime Minister's office that, you'll need to clear a response when you get back from

holiday.' And, it sounded, you know, just like a, you know, we want a bit of a briefing on the 'Power of Information' report, which was not unexpected given that Tom Watson was very much part of Gordon Brown's tribe, and Gordon Brown was then the Prime Minister. I got back. On my first day in the job, I see this request from Number 10, and it basically says, 'The Prime Minister has been talking to Sir Tim Berners-Lee. Sir Tim Berners-Lee thinks the Government should be doing much more with its data, and making it available to others. The Prime Minister didn't really understand a word of this, but he thinks we should do something. So, can you write a prospectus of what the Government could do in six months, and how we might use, Sir Tim Berners-Lee help us do it. This is not particularly urgent. We need a response,' and it was the day I got back. So, in that day I had to sit down and write… Richard Stirling had prepared something that was a very good factual summary of the 'Power of Information' report, but it didn't really seize the, the opportunity of the moment to make a bid, a plan, you know. And, so I sat down and, and wrote the plan for what became data.gov.uk.

Mhm.

And, got it in that evening to the Prime Minister's office. And about four days later comes a call saying, 'Yup, the Prime Minister's keen, OK with that, and he's going to announce it [laughs], the day after tomorrow. Can you give us a form of, you know, form of words.'

So that became your mission then for…

So that, that became, that became the, then I became committed to that.

Yes.

And it was, I mean it was a, it was a nice, how things can… Because we hadn't… We had got traction of social media, you know, with the communications people in Government, they were starting to, you know, be concerned about this. But this data stuff, you know, people said, oh it sounds good in theory, but, people weren't very interested in, you know, doing the work to release their data. So it was getting

traction on that, an opportunity to get that going. And the reason that it was on Gordon Brown's agenda was, it wasn't just that Sir Tim Berners-Lee had talked to him; Gordon Brown was putting through a… It was, this was the time of the MPs' expenses scandal. And, Gordon Brown was worried that, you know, when the *Daily Telegraph* had finished with MPs, they'd come after the Government. So, he was putting together a transparency package, which included reforms to the Public Records Act and earlier release of information, some reforms on freedom of information, and open data, you know, because it would be open, the data will be open, was part of his statement on, I think the 10th of June 2009. And, so then we had a mission to create an open data initiative.

[1:29:15]
And from a standing start, from a…

From a, from a standing start, yes.

You delivered something in seven months, wasn't it?

Yes. data.gov.uk, with, with 2,700 datasets on it. Yes.

Yes.

And it wasn't an IT problem, that, the IT was simple, with the knowledge, you know, with my knowledge of the government IT world, you know, I could, you know, I could get that done. The problem was that, ministries were not very keen on releasing their data, and this was a business issue, not an IT decision. And often it was that, they couldn't really say why they were reluctant to do it. It was largely because, they had never done it before.

Mm.

So there must be a good reason why it's not done.

And how did you overcome that resistance?

You had to… I mean some of it was logical argument, but that only went so far. Because when people, you know, fundamentally don't want to do something, and they're not sure why, they try and find a plausible reason why they shouldn't do it.

Mm.

And, if you knock down the plausible reason, then, then just think of another plausible reason. And you can carry on doing that. And you don't get at the heart of things. So, it was bringing the various dark arts of running cross-government initiatives, of which I had had a number of experiences both in IT and, and elsewhere, building on what people already do. So most of the data in the early days was data that was already available outside Government. So maybe that it wasn't licensed on open terms; it may be that it was only available to researchers; it may be that it was in, it was in printed documents rather than as, the raw data.

Mm.

So, most of the initial data wasn't data that the Government never let out; it was data that it led out but not in ways that it was reusable.

Just making it more accessible to…

So, so making it, you were making it… You know… Well it was about the reuse of data, you know, which means you've got to be able to process it.

Yes.

[1:32:00]
And, another thing you do is that you build alliances with people that can help, and, and where they're trying to do something in the same policy direction where you can get a common cause. So, with the National Archives, had, were trying to drive knowledge management in Government. I already had some relations with the, you know, some relations with them. So, they were accessible. And they actually did the

Government licensing of information. So it was getting them to move from a licensing position where, it was easy to get a licence for a Crown copyright material, you just had to click 'I Agree' on a website, and then you could print out your licence. To get them to move to, well you could actually accept this licence just by using the data. And, so working with them, working with the Central Office of Information, on, getting the website built and a number of things associated with that. And then, not spending too much time arguing with those who objected, and spending more time working with those who were prepared to do something in this area, and making heroes of them. [laughs]

[1:33:35]

I think the other, the other bit of learning was, you don't have, you don't do everything at once. So, in the, you know, some of the harder releases, so Ordnance Survey open data, the Companies House stuff, the Met Office stuff, it wasn't, you know, we were clearly not going to get everything at once. But it was about getting them to put something out there. And then, you know, get that used. And so that they could see some benefit coming back to them. And then that would motivate them to put something else out there as well. So, you know, Companies House moved from completely closed to completely open, but in five steps. And, you know, just starting with a, you know, a basic index, you know, company number, company name, company status, you know. And that actually gets them, with that information people can start identifying and tracking companies, and, you know, do basic checking, you know, in a business-to-business sense. You know, is the company, does the company I'm dealing with actually exist? [laughs] Difficult thing to, difficult thing to check through the old system. And, also I think, and this was, this was big learning for the open data world, was that, there's an important role in Government in promoting the use of its data. A lot of the open data world saw, you know, supply side and demand side, and they just mediated through some, some website that services the data. Actually, the learning point even from these early days was that you've got to engage with the data users of, you know, what data would they like, how would they like it? And, so, some of the big releases of Treasury data, the format had been agreed with the people who were going to use this data.

[1:35:58]

And this process I suppose is, is still ongoing?

It's still ongoing. It's still ongoing. There are…

There have been a few changes since you were involved, haven't there, like… I mean, there was appointed, a chief data officer was appointed I think at one point.

For, for a while, yes. I think what we have seen… I, I don't think that person did a, did a lot. I mean it was the multifaceted Mike Bracken for a while, so, and he was also heading, running the, running the GDS.

Yes.

I think, what you've seen in a number of agencies, so in the National Statistics, Office of National Statistics, there's now a, a major role on dissemination and use of their data, who, you know, does open data, but also, you know, in a wider sense of, how is the ONS material actually published and used, and what do its customers want. We see… You know, the Ordnance Survey were very reluctant to release their data, release open data, because, their mission, as set out in their framework agreement, was to raise money by selling their data. And part of getting the change in the Ordnance Survey was actually to change their mission a bit, so their mission was to maximise the economic performance of the UK through the use of geospatial data. So, they started to use their open data as a way of getting innovation in the geospatial sector, and even for the data which they still charge for, for some users, they moved from a position where a singleton developer would have to pay £20,000 just to get test data, to where all their data is free for developers during the development phase, and for small businesses, it continues to be free. And it's only, only essentially when people are making so much money out of using all this, the highest resolution Ordnance Survey data, that the Ordnance Survey ask for a, a bit of that back, you know, a bit of, a bit of profit share.
[1:38:50]
So, open data, you know, we worked with, me and my successor, worked with the big data agencies in Government to get them to think much more about how national economic performance has been, can be enhanced by use of their data, and by seeing them as the hub of a data ecosystem, rather than a shop for data if you will.

[1:39:28]

I think, since around about 2012 you've been taking the message about open data as an adviser and a consultant to, to other governments around the world?

Yes. I, I retired from the Civil Service at the end of 2010, a bit early, but I, I felt I had done my time. Part of the deal with Francis Maude, who was then the minister for, responsible for IT and, and open data, in order to be able to get out, was that I'd join the Government's Transparency Board. So, continue to advise him. And being Francis Maude, he thought this was a bargain, because he'd still get my advice and he wouldn't have to pay for it. And that gave me a, a bit of, you know, one day a fortnight when I was still, still contributing. So it was a sort of soft, soft exit.

[1:40:28]

But I think the other thing that happened was that, being now a free agent, and not having too much in the way of exacting commitments, I could start accepting those foreign speaking engagements that I had previously just had to turn down, you know, on the basis that, you've got too much work to do anyway, fly off somewhere, give a speech and come back. You know, you come back tired. Your work's still there to be done. And your staff thinking about a holiday. Whereas going to speak in Australia or Canada or Hong Kong about something you know about, when it's your time, and can spend a couple of days having a look around there, is a, is a good thing to do. And, so I did that for, I guess, three or four years, you know, spreading the message of what the UK had done. And, with, in doing that, I made contacts in the World Bank, who were themselves looking at open data, both in open statistical data and in terms of data-driven innovation in developing economies. And, I started doing work for them, speaking about open data, consulting on open data. I wrote their open data assessment methodology, and I did a big study for them on the economic value of open data. And, I have continued to do that. I've also got involved in some European projects that have been engaged in open data, and done some work for the African Development Bank and others, internationally.

[1:42:28]

Are these… You know, it's true, isn't it, that the UK model of e-government and digital engagement has been quite influential across the world?

I think it's, I think it's become more influential. I think for, in the… There was a period where the UK didn't look as, as good in things like the UN e-government ratings, compared to some other countries that had got, you know, websites, more websites, but hadn't really looked at the business transformation. Now, the UK's reputation on digital government is very, is very strong, and is the, the leader in the UN rankings, because it's actually more transformational than has been seen in other countries.

Nonetheless, would you, would you say that, from your experience of talking to other countries and so on, are there things we can learn from, from others?

I think there are some things we can learn from others. What's actually struck me is that, how, how many of the issues are the same in every country, and they just have to be, they just have to be worked through. So, this divide between, if you like, business people and IT people. The way IT people naturally go into the sort of, cocoon of technical wizardry, and business people don't really want to think, really think how they do, they do their business. Open data, I hear the same reasons why not to do it from, in other countries as I heard in the UK. And even with, you know, stories from the UK of where there's been real benefit to the economy or to citizens through the release of open data, people, you know, in those sectors in other countries don't really believe it. You know, there must be something going on, or they can do it in a more directed fashion themselves. So, you know, some of, some of the things that I thought were peculiar to Britain, actually are generic in bureaucracies.

[1:45:12]
What would you say the proudest achievement of your career has been?

[pause] I think the open data has been a, has been a high, but I, I think, finally getting the Social Security system in the UK computerised was, was the time of my life, you know, really. I was, mid-thirties, driving very hard, had been something where predecessors had failed, and, you know, we just, we just drove it through and, and made it happen. And, you know, invented ways of doing that as we went along.

[1:46:00]
And if you had your time again, is there anything you would have done differently?

Oh. [pause] Yes. Yeah, I mean, obviously, I think, I think for… As you get more experienced and more mature, you start to worry about how it looked to some of the other people at the time. And, you know, if I, if I had known then what I know now, you know, managed those people better, and brought, and brought them along, along better. I think one of the… We took some pragmatic decisions on the computerisation of the Social Security system which needed a lot of sorting out later. So, when I went back to the infrastructure job, one of the things I, I found was that I had responsibility for 150 people in an office in Newcastle who had half a million files. And these were the files of people whose records could not be reconciled between two different computer systems. You know, a lot had been reconciled through data matching, but, you know, with 23 million customers, you know, two per cent error rate is half a, you know, two per cent non-match rate is 500,000 files. And, that was because we had taken a pragmatic decision not to do that alignment and enrolment onto a single identity system at the start of the drive to get the Social Security operational strategy through the, through the door. We hadn't realised how important it was to get the data right and consistent, and linked. And at that time there wasn't the operational need for it, because the different benefits operated independently. Now, you know, ten years on, when the Department wanted a more strategic view of its customers, then, suddenly this was a, something that had to be fixed.

[1:48:22]
Well, the whole question of identity assurance is still humming around. I don't think we, we haven't got time to cover that today unfortunately, but that's a big topic.

Well, I mean this was, this was people who had already been identified through the departments, and then, and then been identified again.

[1:48:40]
Yes. OK, so, what do you think the biggest challenges and opportunities for the IT industry are over the, say the next ten years?

[pause] I think there's a continuing issue on cyber security in all its assets, and it's not – aspects, and it's not just about confidentiality. So, you know, we're now rolling out Internet of Things, Internet of Things things, which, you know, not only aren't properly secure, but can't be updated. So, you know, how, how would you, you know, how would you download the monthly patches for your refrigerator, or your microwave? I think there's still enormous problems in getting systems and solutions that are easy for everybody to use, including people with disabilities, including older people or people who don't fluently speak the most common national language. So, I think we, we have problems of digital exclusion, and you see those in other, in other countries as well. And, we continue to build islands of information that get solutions that just work with one vendor and don't properly integrate. And, you know, that's, you know, that's done for, sometimes, often for, sometimes for commercial reasons, sometimes because people are just not really thinking about how their systems and the data within them could be part of a wider ecosystem.

[1:51:05]
What advice would you give someone entering the IT industry today?

[pause] Don't worry too much about the IT. It's the interface with people that's the, that's the challenge. So, think about how people are going to use the system, encounter the system, what they will expect for it. And, you know, some of that is, people can be tremendously flexible when they feel there's a motivation to use the system. Whereas, if they have the motivation to use the system, then they will push back against any difficulty within it.

Mm. So harvest enthusiasm. Andrew, it's been fascinating hearing about your life, and your involvement at the epicentre of open data and e-government. On behalf of Archives of IT, thank you very much for taking the time to talk to us.

OK, thanks.

Thank you.

[End of Interview]