



THE UNIVERSITY OF
SYDNEY



Pearcey
FOUNDATION

The Past and Future of Australian Innovations in Information and Communication Technology (ICT)

Oral History Interview

06

Lyndsey Cattermole

Interviewed by:

Graeme Philipson, Sebastian Boell

Interviewed on:

Wednesday 09 September 2020

Project Summary

This interview is part of a series of oral history interviews undertaken by the Pearcey Foundation and the University of Sydney as part of the project ‘The Past and Future of Australian Innovations in Information and Communication Technology (ICT)’. The series interviewed recipients admitted into the Pearcey Hall of Fame from 2003 to 2020. The hall of fame recognizes outstanding life-time contribution to ICT in Australia in business, research and government. Each oral history captures a short biography of individuals who made an outstanding contribution to ICT in Australia. They also collect insights on aspects that had a lasting effect on ICT innovations in Australia, positive as well as negative from approximately the 1960s to the 2010s. Interviews lasted about 60-90 minutes and were conducted by Sebastian Boell, Graeme Philipson, Peter Thorne, Kai Riemer, Sandra Peter and Belinda Wang. The complete set of interviews in this series is archived by the Pearcey Foundation.

Key Points Covered in this Oral History

1. Education promotes new generations of innovation. Basic education needs to cultivate deep thinking capabilities for younger generations.
2. R&D grants were exploited by governments, (such as the IR&D grants always go to companies that were already profitable) which did not support genuine innovation.
3. Looking down on basic research (didn't respect academics) is a narrow-minded trait of Australians, which is disadvantaged innovations.
4. The IT industry in Australia was overrepresented by the multinational companies, government shall support and buy from local enterprises to promote the recognition of local companies.

Biography

Lyndsey Cattermole AM

Founder and Managing director of Aspect Computing
Pearcey Medal in 2003



*Entrepreneur, board and membership positions in governments,
adversary and associations*

Ms Cattermole has been a distinguished and influential figure in the Australian ICT industry for thirty years, building one of the nation's largest and most successful software and services companies and taking a prominent role in promoting the industry through national and international bodies.

She started computer programming and systems analysis in the early 70s and by 1974 had founded and become joint managing director of the software and services company Aspect Computing Pty Ltd. When Aspect was sold to KAZ Group Ltd it had 1,300 permanent staff and offices around Australia.

Ms Cattermole has served on and chaired numerous committees and advisory bodies, including the Women's and Children's Health Care Network and the Prime Minister's Science and Engineering Council.

She is presently director of Foster's Brewing Group Ltd, Kaz Group Ltd, Madowla Park Holdings Pty Ltd and Lansa Holdings.

She is also a board member of the Melbourne Theatre Company.

Ms Cattermole was the founder and managing director of Aspect Computing, the largest Australian software and services organisation. She also spent many years at the Royal Children's Hospital, as Vice President and inaugural Chairman for the Women's and Children's Health Care Network.

Ms Cattermole was also instrumental in forming the Murdoch Children's Research Institute. Ms Cattermole has been at the forefront of the IT Industry, including the Australian Computer Society, the Prime Minister's Science and Engineering Council, the Federal Government Electronic, Electrical and Information Industry Board, the Multimedia Advisory Committee, State Development Committee and The Premier's Business Round Table. She is currently a Board Member of Treasury Wine Estates, Tatts Group, PACT Group, the Melbourne Theatre Company, Melbourne Rebels Rugby Union and immediate past Chairman of MLC.

Ms Cattermole has also been a Director of the Heide Museum for Modern Art, the Melbourne Theatre Company and has spent over ten years involved with community health, including at the Royal Children's Hospital Foundation and as Chairman of the Women's and Children's Health Care Network. She was instrumental in merging the Royal Children's Hospital Research Institute and the Murdoch Research Institute, to form the Murdoch Children's Research Institute; which is now one of Australia's largest biomedical research institutes.

For these significant community involvements Ms Cattermole has been awarded an Order of Australia (AM). Ms Cattermole is also a Fellow of the Australian Computer Society recognising her distinguished contribution to the Australian IT industry.

Interview Transcript

Date of interview: Wednesday 09 September 2020

How did you get started? Can you briefly go through your career in IT?

Oh well, a chance remark at a party when I was at university. I was working at Myers, which I lied about for 10 dollars 50, I was 14, and I'd done that for a few years as a part-timer and I was, let me think, in second year doing science and I was at a party with my current husband, and he was still a student, and he was graduating that year from dentistry, and one of the guys said oh well, I won't be doing my part-time job anymore because I'm going to graduate and be a dentist, and I sort of in a haste sort of said what is it and he said I just do part-time work at IBM, and I said, because this was Friday night remember, and Saturday morning was when you had to work retail, it wasn't like it is now, and the thought of going in on a Saturday morning, and I said do you have to work Saturday mornings, and he said no, which of course I now know is bullshit, but that was then, as a part-timer, I said oh, I'd love to do that and I think it probably paid a dollar more, and so he kindly got in touch with the fellow he'd be working for who was a guy called Stuart Mellings who was a manager down at the Fitzroy data centre, that's where I first saw my first condom and I slipped on it - going into work.

What year are we talking about Lyndsey?

This is '67, okay, so this is terribly old and, yes '67, must have been first year uni, and so I went for an interview with Stuart who was quite lovely, and they said yes, they did need somebody to do some clerical work and empty the rubbish bins and decollate, decollating was great fun, you get filthy, and...

I remember, I decollated myself in my youth.

Oh absolutely, there was an art to decollating, and buy the lunches, so and I got the job, I tell you, I've never done this before, he was called out of the meeting and he had just had delivered to him a cup of tea and so I thought oh, this is going to go cold, so I turned the saucer upside down, I just didn't put it with the bottom over the steam, I turned it so that when it was put back on the, this is the housekeeper in me, so that it was put back on the desk, it wouldn't leave a wet ring. Anyway, he came in and he said, where did you learn to do that? I've just never done it before, he said you got the job. So that was my start. So I did that for a couple of years until I graduated, and I was doing a geneticist qualification in microbiology and genetics, but fortunately I had made enough noise and I guess made myself so good at decollating that they asked me if I wanted to join their graduate program, and fortunately, don't tell anybody, they didn't make me sit the aptitude test, because there is no way I would have passed that aptitude test. When I compare myself to the others that came in at the same time, and oh my god...

Those IBM aptitude tests were famous, did you not have to sit it because you had been working there part time?

I don't know what the reason was, and I didn't ask, I just know that they didn't ever ask me to sit it, because I probably would have been good at the one, two, three, what's the next number, but when they show you pictures of a dead possum and an old boot and ask you to choose from a house or a waterfall, I wouldn't have a clue.

So how long then did you stay at IBM?

I think for nearly a couple of years, then I was at IBM in England, IBM in Melbourne trained me as a programmer and then you get to be called a programmer analyst and then you get to be called project manager, and then I went to live in England and I got a job with a contracting company effectively, which was my first exposure to the sort of thing that I ended up starting myself, but I was put on assignment to IBM for the next two years over in suburbs of London, so that's how it came about, and really it was the best thing that could have happened to me.

What years were they?

That was, IBM here was '69 to '72 as a full-timer, the end of '69 to '72, and then in mid-'72 to early-'74, so nearly 18 months, that was at IBM in England, and then I came back and set up Aspect on my own, sort of looking at the model of what I'd done in England and in fact the guys at England said well why don't you do it in Australia? I said I don't know.

What was the initial aim of Aspect, what did you actually do? What sort of work?

PL1 programming because that's all I knew. I'd been taught PL1 at IBM and I sort of modelling, the very, very first income I made was actually running courses in PL1, because as you know the graduates from uni in those days either had Fortran or COBOL, and there was a very small, probably at most eight or nine installations in Melbourne and another five or six in Sydney that used PL1, the big companies.

It was exclusively an IBM programming language, wasn't it?

Absolutely, exclusively, and it was a combo of Fortran and COBOL and a quite powerful language, and so I was able to sort of bring the half a dozen people that ran IT shops with this language because that literally is all I knew, and fortunately after a few months of very lonely times, just such a lonely thing starting a business, IBM had let down, you may recall Guardian Royal Exchange Insurance, they don't exist anymore, but they had hired 12 graduates from various universities who needed to be trained in PL1 and IBM of course was the selected company, and on the Friday night before they were due to start on the Monday, IBM rang and said we can't do that, we haven't got anybody, so I had made a call, it's all in the timing of course, I'd made a call to the, Roger Gatward was his name, well he'd be a CIO, but he was a DP manager in those days, I'd made a call to him probably just a week earlier desperately trying to get some work, this is after a few months, and he rang me quite late at night, he rang me at home because I'd given him my home phone number, I did have an office at that stage which was out the back of a secretarial agency, they don't have those anymore either, and he rang me about 6 o'clock at night and said if you can get here on Monday and run a course for a couple of weeks, you got the job. Oh shit.

Of course the universities of course were teaching COBOL and Fortran and not PL1.

And as I said there were three or four big private companies and several government departments, ICI, GRE, National Mutual, that used PL1 that IBM sold them for their mainframes, and so they were desperate and that's how I got going and...

So did you, was it just you or did you hire people or...?

Just me, just me for a long time and then I kept trying to get more work and I got to run some more courses and then I won a programming job from a mob called Beacon Research, which was hysterical, that was to evaluate cleaning products, I don't know why they came to a PL1 programming shop, which was me, just me at that stage, and then I hired my first employee after about nine months or so, and she had been my supervisor at IBM.

Oh right, so just to clarify the year again?

'74.

'74.

Yeah, and then as I said she had resigned from IBM a couple of years earlier to have children, couple of kids, and so I rang her and said I've got too much work, do you want to come in, and so that's how it started, and somebody told me a few years ago that 10,000 people had been through [*indistinct*].

Sorry Lyndsey, you broke up a bit then, what did you say?

Oh no, she was my first employee and later in '74, as I said somebody worked out towards, before I sold the company that there'd been 10,000 people that I'd employed, we had employed through Aspect over the years.

When did, now I know Pete Draney much better than I know you, when did your relationship with Pete start?

He joined me in '76, and had...

In Melbourne or Sydney?

He joined in Melbourne for a few months, but it was always the intention that he would go to Sydney, because by then I'd just had my first child and I was on a plane running courses up there and typing invoices at night down here on an old typewriter, and it was always the intention that he would, if we got on, that he would go to Sydney. And then a couple of years or some years down the track after that I split my shares and we became partners.

50-50.

Yes.

Yes, did he buy in or did he work his way in?

Worked.

So what year was that what year did Pete and you become partners?

Officially about 1980.

Yes, so by this time, how many employees did you have?

By then, heavens, probably no more 30 to 40, something like that.

And the work, I imagine the work evolved beyond PL1 programming?

Yes, but it took a while. It was probably not till about the late 70s that we got our first COBOL, and that was a big leap, and it was really the way we hired all the time. I just had an applicant who was so fabulous, you fall in love with people, and she only knew COBOL, so I said oh well, we'll go find some work for a COBOL programmer.

Were they all employees or did you operate as a sort of a body shop?

All employees. Towards the last few years in the late-90s we did out of desperation occasionally go to contractors as I would have called them, either for a specialised skill or it was the only way you could get somebody for something, but the model was employees. Whether that was, again, I don't know, but I knew nothing else.

Yes, so did you then evolve beyond programming and systems analysis towards other types of service?

Yes, we did. Over the years education was quite a key trojan horse for us and it was a differentiator from the day techs and the computer powers and all the rest of it, which of course when I started were really big companies, and I used to think oh my goodness, so education was actually quite a good trojan horse, particularly...

By trojan horse you mean education got you into an organisation and then you were able to move beyond it.

Exactly, then we would sell then services or, I mean in those days it was mostly bespoke services as you know, we'd put people into our clients' sites to write, design and write systems. It wasn't, there was very little off-site development, it was mostly in our clients' premises, and in fact that was our preferred model because we kept the real estate down at the stage, and our preferred employment model as I said was employees, but so we had the education on the way through, we had training and analysis and systems design. We did not do what I would call a lot of consulting. One of the aspects of Aspect was each branch looked really, really different, if you walked into our Adelaide branch, and where we had a fabulous manager, funny interviewing situation when I hired her and everything, because I got some work there and I didn't have anybody to run the place, so within day one it would feel very different, it would look very different. We gave them a cheque book with their first day, anybody of our branch managers. Canberra was different again. Brisbane, Perth, I had one in Perth, well that's just outer space, I mean Perth is like another bloody country. We were more familiar with the west coast of America than we were with Perth. But so they were very different, but Adelaide, for example, actually had quite a nice consulting practice, what you would have called consulting, so it was pre-systems development, you would be going in and advising on business applications and things like that. I would say that for the most part where the bigger branches were, which is Melbourne, Sydney, and Canberra, Canberra became quite a big branch, I don't think, Canberra did a bit, but we really never called ourselves consultants, which everybody else did.

Who was that guy that was running Canberra for you for a while? I think he was ex-public servant.

Michael Blake was our...

That's the man, that's the man, I remember him well.

Yes, well everybody remembers Michael. He was our last abiding manager, we'd been through quite a number of others and Michael was there for some time, we did hire him from the Department of Trade I think he was when he came to Japan with me and Pete when we were on a trade mission or something or other, and we hired him and then he eventually was made manager, oh god, probably the last four or five years before we sold.

When did you sell?

And then he stayed on. 2001.

Who to?

KAZ.

KAZ. Okay.

Yes. I stayed on the board and Pete stayed on to run Sydney but look, like all these acquisitions it doesn't last.

By this time Pete had also started, were you involved with LANSA or was that Pete's effort?

No, in fact it was started in Melbourne, but it really became a very Sydney-centric development and salesforce. We continued with some of the developers in Melbourne but really that was a very, very Sydney...

So what was the, when did LANSA start and how did it start? What was the motivation for developing your own 4GL?

I think it was Colgate-Palmolive. I think so, they were RPGshop, and this is of course when we'd gone far beyond the PL1, they were in RPGshop and wanted...

But LANSA was initially AS400 or System/38 only, wasn't it?

Exactly, System/38 and then it evolved into, and then we of course got other versions of it, but it was essentially an RPG generator in its genesis, and I think it was Colgate-Palmolive wanted a more rapid means of developing RPG systems, so we wrote early version and then with full permission of course, etc, because we maintain the copyright and we turned it into LANSA over a lot of iterations...

So when was LANSA released as a formal product?

Oh Jesus, probably first third of the 80s, probably say '83 to '84 or something.

That early, yeah.

Yeah, I think so, no, maybe later 80s. It had certainly got a lot of traction, we split it out some years before we sold.

Yes, yes, I remember that because when it was sold, when you sold Aspect, LANSA continued on and indeed still today continues on as a separate company.

No, no, it was sold about a year ago.

Oh, was it?

Yeah, we sold it.

Who to?

Oh shit, I don't know, Pete did all that.

They paid you all that money and you can't remember who they are?

No idea. They were an accumulator of tools, I think for its AS400s, obviously I'll have documented somewhere.

I can look it up, so an American company I assume.

I think so. Yes.

Pete retired a couple of years ago, didn't he?

Who?

Pete Draney.

No, he is working with some of his former staff and a former KAZ senior executive in a software company. I think they do stuff, I'm not sure absolutely what they do. I mean he and I talk all the time but I've got no idea what he does.

I'll chase him up, I haven't seen him for a couple of years. We always got on very well, Pete and I.

He's gone back but of course he's got his love in Brokenwood with his wine, and I think he has all of that now, but I know he is doing some work with a bunch of other guys that are mates. Yes.

So Aspect in the 90s, it evolved quite a bit, you sold it in 2001, how would you describe the company and what you were doing in the 90s?

Well, I can tell you it was exactly the same as we did, but more of it because, and the only reason I know this is when we sold, it was established of course pre-capital gains tax, and so when Pete and I sold no capital-gains, no capital-gains tax and then the Tax Department was hot on investigating that and we were able to show, Pete is a hoarder, we were able to show that even the old handwritten advertisements that we put in the paper, were named exactly the same categories of work and a lot of the clients were the same. It was really interesting when we looked back we'd had 30 years of the same clients on the books. Obviously, not all of them were, but there was a, so we were able to say that, what we were doing was really a lot more of the same, we were still famous for developing systems, we were famous for punching above our weight in government, we were one of the only four preferred suppliers to Defence and the others were all international companies. We were just famous, we were famous for if we stuffed up, we'd go back and finish it, our staff, we were regarded as a huge fishing ground for other companies because we had terrific staff. We were the first local company to employ graduates. The other internationals, IBMs, etc, employed graduates, we made a decision very early on that quite frankly they were smart, could easily teach them PL1, and we were told, I remember being told by Roger Allen at Computer Power that oh, you're mad, you don't get any revenue from them, and we also were famous for putting square pegs in round holes staff wise and making them work brilliantly. We had quite low turnover

compared the industry average, we had a much higher percentage of women than were in the industry, and so we were really well reputed to run a really good business and we were still going into people sites and running systems.

When did you spin off LANSA as a separate company?

Oh god, I knew you'd ask me that, I would say probably about '95, '96.

Yeah, I can easily look that up Lyndsey and how...

I'll tell you why, because we'd established in America and that became, Chicago became the head office because that's where we thought the bigger market was, in fact it turned out to be Japan and Europe but that doesn't matter, and it was in the days when everybody in software companies or start-ups were getting options. You go back to the mid-90s and we just couldn't get staff or keep staff in the States unless they had options, and so we established quite frankly a separate enterprise, and it looked better for the American market that is for sure, but it was actually around about giving the US-based staff options.

That was one of the major drivers in spinning off LANSA as a separate company, was it?

I would say so. Yes.

Yes. Okay, now when you sold to KAZ in 2001, how big was the company then?

We turned over 200 million and we had about I don't know, I can't remember.

So, was the sale price disclosed or was it a secret?

Yeah, because it went to a public company.

Yeah, and how much was that amount? Do you recall?

Yeah, 200.

200 million.

Yeah, about the same as the turnover.

Yeah great, and that was about the time we sold MIS magazine to Fairfax. Okay, so your life since then, 20 years nearly...

Yeah, long time.

We see all the boards and things that you're on, but what's been your main professional activities since then?

None really, I decided very early that I didn't want another executive position in anything, particularly IT, I thought I'd done my risk, and in fact I've never taken a board position, although people have been very kind and offered me ones in chairing this, chairing that, I've never really taken a board position on an IT enterprise either. Look, just because nearly 30 years of lying awake, and I think when you, it's ridiculous as a non-executive director, if you know a lot about a particular agenda, you're just bound to want to get involved in the management, you're bound to as I did for 30 years, lie awake at night and worry about the bloody payroll, so I deliberately and unusually didn't ever take on anything that was involved in where IT was the revenue raiser.

Yes, so what have been the highlights of your career since selling Aspect?

Oh, well the board, I mean I've been pretty successful with, most of the boards I've been on have always done pretty well during the time I've been on them and on either exits or continuing businesses. I've helped a few other people, I've invested privately in a lot of things, I'm very, very generic in investments, in private companies and start-ups, some of which have borne fruit, most don't, that's okay, I see it as a charitable endeavour. So really, I don't think there has been professional highlights, and I don't think being a non-executive board member is a professional highlight, it's easy.

No involvement in any IT related start-ups?

Oh yes, as a shareholder.

Yes.

No, I've backed quite a few, but I've chosen not to be in any way executive or non-executive role.

Are any of those start-ups, IT start-ups you're involved in, did any of them go on to become successful or companies that we'd know?

No. Some are still going after maybe 20 years or more, and they're still small, and are any of them actually? No.

No problem. Okay, let's switch, that's your life in a nutshell, this is your life. Innovation. What do you think is the most innovative thing you ever did in your career?

Start Aspect.

Why was that innovative?

Oh, come on, it was 1974, I was 24 years old and holding my breath, of course it was innovative, and then innovation constantly during the company. As I said we were the first people to hire graduates, we were the first people to take on, I mean I put ads in the paper for nurses and teachers because I just knew they'd be really good in the business, I was told I was mad. We were really good. I think the HR side of it we were very good at, a lot of that was probably because of the people, so consequently we stayed ahead of most of the enterprises in Australia and we invented lots of products, it wasn't just LANSAs, we had quite a few, some we actually sold, quite successfully, our schools administration and university administration systems, we sold those, we had a moderately successful retail...

Did those products you developed, did they have any sort of common feature that made them innovative, was there some sort of innovation and driver in the organisation, what do you think was the key aspect of Aspect that set you apart and allowed you to successfully build these software products?

They worked. We were good at it. I mean most of my...

You just mentioned you hired nurses and teachers and you were really, that was distinguishing, so nowadays we hear so much about we need to increase STEM training and more STEM, and some people realise that's actually not the best graduates for IT companies, what made you realise that nurses and teachers and non-IT, non-computer science graduates are valuable to your company?

Well first of all they have a background that they understand delivery, and that's not always the case with highly skilled techos, they have chosen to be in jobs where they deal with people. This is when everybody thought IT was back room, we never believed that, we always thought that the ability to be able to work with the bosses in an enterprise, the other programmers you're sitting beside, a lot of companies didn't think that was at all important, we did. So, and quite frankly we got people that were good managers, terrific managers, good project leaders, could go in and analyse a problem and come up with a solution, even if they didn't cut the code, not all of them became programmers or analysts, sometimes they were project managers, it was those sorts of skills that we thought would be valuable and it worked a treat. And it got us noticed, people...

So if I reinterpret what you're saying, you would argue that there is a need for a certain training that makes graduates more attuned to understand the developments of a problem and have soft skills being able to deal with people rather than technical skills?

Absolutely, you don't want dummies, you don't want somebody that's just really, really good with flirting with the clients, but oh no, I absolutely hold that view, and I still think it continues, I've always thought that your attitude is much more important than aptitude, and we made a strength of that throughout the company, that was something that was fairly consistent in all the branches. We were very willing to try oddballs. We hired, I remember in Sydney, Pete hired a 70-year-old, and this was in the height of the youth, this is going back probably to the early-80s, everyone said, god, you've got to be joking, he was with us for another five years and he was fabulous. We did things a bit differently. So innovation, in a technical sense, I know that will turn you on, I don't think we were terribly technically innovative, we always said we didn't want to be leading edge or bleeding edge. We were fast followers in terms of the technology and applying it properly, as opposed to getting our jollies out of, oh no, we had some what I used to call systems programmers who would spend their entire day building into dumps, but they were in the minority, and you'd call on them, rattle their feeding cage once a day and call on them when you had a need, and we had a smattering of them but not all that many. Can I just, before I go, I don't want you to be left with the impression that we were not technically really confident and competent. We were. We were really, really good but it wasn't all that we did.

No, I mean, nobody would deny that, but the point that you have to have other skills than just technical ones, I think it is an important one.

I think so, yes.

So, this is a bit more to like assess our, with your insights around what helped you to be innovative and what helps the Australian ICT in general to be innovative, or what has hindered it over your career. So education and training, what is Australia doing well in terms of education and training for IT or what could be done better?

I could only go on anecdotally because it's been too long since I've been involved in the hiring or the training, but my gut feeling is regardless of what industry, our education and training is shit. I just had this feeling, I look at my own, even my kids, the next generation,

the teachers couldn't spell. The maths was, it's a bit more advanced but it was, and now I look at my grandchildren and I think my god, they're just, it's just horrible. I have a feeling that the cookie-cutter approach, that the dumbing down, and hence people talk about more STEM education for all genders, it's not really exciting me, but the amount of prac work you do, let's say you're at university, I don't even know when they do it, they have no contact hours, it's all learning, you can write everything off Google and provided they don't have a plagiarising software, you can get away with that, I just think, and I do know people that are employing are desperately concerned that what they get straight out needs some very basic teaching. These are people with tertiary degrees and everything, they just can't spell, can't write, can't add up. So I think that this country, and you've only got to look at the OECD numbers and the ratings where we stand in whatever the standardised tests that they have, we are stepping backwards so fast, and I worry for innovation, I worry for our ability to support the country in anything other than getting iron ore out of the ground. COVID has started to make people think about manufacturing, and that's only because their supply chain has slowed down, it's got nothing whatsoever to do with looking at the future of Australia. I despair, I think that we are going to be as a country really, really, really, we will be what other countries are outsourcing their call centres to if we keep going the way we are going.

Who was it that said, Mahathir I think, that we've become the white trash of Asia.

Yeah, and now [*indistinct*] thinks the same thing, so that's okay.

Maybe I could phrase it more positively. In order to understand what we should do more of, what kind of graduates do you think had a good profile that contributed to the success of Aspect?

Yes, oh that we had, they were not, they were usually people that had had other jobs, they'd worked at McDonalds as kids or something like that, anybody that had done anything in customer service you'd get a big tick, anybody that had actually sort of, could write a CV, they got a tick, anybody that could explain to you, the other thing that was really important was when you interviewed people that were experienced they could tell you what they'd done in some detail. A lot of people had quite good CVs, but when you said to them explain how you develop such and such, it was really scant. They might have managed to develop it but they couldn't actually explain why or how, or what problems they solved, and we were always a bit suspicious of that because you can go through life with good CVs. So I think those skills are still the same, I think the basic ability to think on your feet, the basic ability to do a bit of work behind the scenes, such as you go into something a bit prepared instead of just winging it, whether it's an interview or the job, and life skills of course.

So that in many ways brings us to our next trait or next factor. How important do you think personal traits like perseverance or leadership skills are in fostering innovation?

I mean leadership is clearly important because you've got to be able to convey your dream. Now even if you're self-funded, etc, you've still got to sell the first one. Nowadays it's far more common to be selling it to an angel investor or a VC or something like that, but I think the ambition, frankly it's just hard work, you've actually got to stick at it. I'm totally, I won't invest in anything where the founder is driving an expensive car. I won't invest in anything where they're not available to ring at 8 o'clock at night because they're doing whatever, and I do worry about working from home in such large amounts that's happening now, but let's put that aside. I think the first thing that most founders do when they get a bit of angel capital nowadays is they go out and buy a car or they spend it on a holiday. A few things I've

invested in, I'm in angel investment group, is within the first six months the two young women that started something, who have long-gone although the company has gone on, one had to go skiing because she needed a break and the other one really couldn't cope by herself while the other one was away so she needed a break too, and I thought fuck, I mean Jesus, why would you support those two? So I think hard work, I think truly, I had no qualms about telling them what I think. I think you've just got to be able to work hard, and this is not very common nowadays. There's a lot of snowflakes out there. Oh god, I'm very involved in my precious rugby team, and I've got these fantastic young men who are really charming, they've had to be based in Queensland for the last seven weeks or something, oh, and they're homesick and they're pining, I thought thank Christ we're not at war. I mean Jesus. Oh fuck, anyway, I'm supposed to look after their mental health.

Is that the Victorian rugby team you're involved with?

Yeah, the Rebels.

The Rebels.

And my St Kilda boys are in Noosa, but I just really do despair for the lack of resilience and thinking on your feet and hard work that is staring us down the barrel. The only thing I can hope is that the rest of the western world is exactly the same, so we don't have a competitive, so we're still in the same place competitively, even though the whole thing has gone backwards.

Of course, the eastern world and there's a work ethic in Asia that's very strong in many countries.

Oh yeah, we've got no hope there, let's face it, I mean Jesus. Have you looked at the kids who get on the tops of the schools?

Yes. So...

I hope it's only their first generation and then the second generation comes back to being like the rest of us.

What do you think of the importance of government support, government funding, government policies, government intervention in helping innovation in Australian software?

I think it is important despite me usually not being a government supporter. See for years when I used to do a lot of government committee work, etc, I begged when they started the superannuation fund that 1 percent would go into Australian innovation. Needless to say, that was, they didn't like that idea at all. But I know they're at least starting to think a bit more along those lines. I mean CSIRO, the day it become competitive against normal companies like mine, I was on the advisory committee for CSIRO, but when they started bidding for the work we were doing because the government said oh, you have to be self-funding, I mean this is a tragedy. You can't do that sort of work whether it's biotech, whether its IT, whether it's new materials or agriculture, you've got to be unfettered in terms of having to earn an income. Now, the R&D and the innovation in Australia I think the R&D grants are totally exploited and are wrong. Now I do know that the Tax Department is starting to cut down on it, I know of enterprises that get quite significant refunds for doing absolutely doing nothing innovative at all. They've written a spreadsheet that connects SAP to Microsoft and they're claiming it and getting it, because they bring in a Deloitte or they bring in a KPMG who puts a really good case together, in some cases for a share of the gains, in some cases for a fixed

fee, and they're getting, and this is outrageous. And it's very hard to say support genuine innovation and R&D when that's happening and the money is being syphoned. I remember when I was in the IR&D board, a long time ago, and the only people that would get the IR&D money were already profitable, and I used to say BHP doesn't need it. For Christ's sake, but nothing changed, it's still, Atlassian writing a bloody, oh Jesus, don't get me on Atlassian. Perhaps I'm just jealous.

We talked to Adrian Di Marco recently and he made very much made the same point, very strongly.

Oh, did he, well there you go, he's an oldie like me, but so I do believe in government support and whether it's the form of matching or whether it's tax breaks or whether it's loans or whether it's supplying staff, but what was the MIC one where they put in managers with investment, well goddam, that was destined to fail. So there are programs, and I think they should be encouraged, but I just think there should be more money in general in Australian R&D, not just IT and IR&D, in our biotech, in agriculture, I mean we actually do have some quite nice advantages there which have not yet been completely denuded by our lack of innovative and hard-working young people, but I despair that they will be lost too.

You said you were a part of a number of government committees, I think Peter Thorne mentioned that you worked on a report that was called buying our future.

Oh probably. I did lots of them Sebastian.

So maybe can you maybe elaborate a little bit on what kind of advice you were giving there?

I was always pushing Australian in every circumstance. I mean one of the reasons I never agreed to be chairman of the AIIA, and rightly so, it was funded mostly by the multi nationals, and I could not represent us without it constantly pushing the Australian made and Australian owned agenda. So all of my, whether it was the Prime Minister's Science and Engineering Council, whether it was the IR&D board, whether it was the Export Development board, I was really passionate about looking at and supporting and buying from, importantly buying from Australian enterprises, and in my industry, government, who were the biggest buyers of all just would not. It was terribly difficult, we were an absolute outlier in the amount of government work that we did, but when it came to large developments they'd go straight to CSA or IBM or whatever. Now, we fortunately often got a gig by partnering with them but it wasn't the same as getting the front row, and so my thrust in every opportunity was always to promote and plead for both contracts and recognition of what went on locally, because there was some terrific things, but of course particularly government buying if you couldn't take them on an overseas trip, you didn't get the job, forget it, it was just out of the question.

Is that the main motivation is that people want to get a trip overseas or is there some underlying...?

Yeah, no, and preferably pay a whole lot more because you get status when you pay a whole lot more for something, and nobody ever went broke for buying IBM, although it's a bit different now, it's whatever it is now. But so I did have that as a very constant thing, and I was very lucky to have a platform where I could actually voice those sorts of views and I think they were listened to. They didn't do a lot about it because when it got down to bureaucracy that would be ignored. Politically sometimes it was considered attractive, but then when it actually came down to somebody's budget or somebody's trip, that was government. Private industry I didn't expect the same sort of waiting, however, they were far

more willing to give a local company a go than government was, it was really interesting. So as I said on the IR&D board it always amazed me that there'd be some terrific applications, I'm going way back, and this wasn't just IT&T, in those days it could have been somebody trying to develop a new wheat germ or something like that, but because we saw all sorts of things, and it always disappointed me that we couldn't ever, ever get significant funding for something that was I suppose was relatively start-up or wasn't already a profitable enterprise. It just didn't make sense to me. That didn't change. A lot of these boards have long gone, and they're replaced I presume by similar, things with similar agendas, I'm not sure, because the names change and the governments, they change. But I felt very deeply that, and CSRIO was a classic example, I just begged, whatever committee I was on at that stage, I said don't do that, you're just actually spoiling, and for the small amount of money it's going to return to make somebody's budget, whichever department, whichever government department they belonged to, science and whatever it was, for the small amount, relatively small amount they were going to return, it just changed the whole culture.

Yeah, what do you think happened...?

Oh, and the other thing was pleading for mezzanine capital in those days, pleading for enterprises to find some money somewhere to be able to commercialise things, and that's famously Australian. Send it offshore, send it overseas as a minion and let it come back as a giant because somebody else recognised it and commercialised it. Another thing, the psyche of Australians, this is really interesting and I suspect I was guilty of it, we are not good joiners. A lot of Australian founders and entrepreneurs would rather own 100 percent of something worth 55 million than 5 percent of something that's a billion. We're not traditionally very good at getting into partnerships, and the numbers of times where you get a VC, it just doesn't work. The founder still wants to do it their way, they don't recognise the commercial realities of what they got into, they want to take the money and still be beavering away in the back room, but I do think the Australian psyche is not good at joining.

Yes, is that something we could address with university education? The mindset to be more partner oriented.

Yes, and I mean there must be statistics on the benefits of it, even commercially, but I do think it's probably, I don't know what you teach except by example or case studies and that sort of thing, but I do think in the university sphere you could be teaching tolerance for other views, could be teaching that you don't have to be the boss to get the benefit, that there's a certain point, and hopefully the management schools teach things like that, there's a certain point where a better manager will do better, these sorts of things. See you've got to remember New Zealand, their banks were joined long before ours were in terms of exchanging information. They've had pharmacists online to doctors 10, 20 years ahead of Australia. We couldn't, I had a pharmacy system for a while and do you think we could ask, the government goes oh no, they've got to stay independent, oh no that's confidential. Bullshit, this would be good for people's health. It's really hard to get people to do things in a collaboratively fashion here and it's not just at the founder level.

Thank you, maybe just one or two sentences from you, why do you think you were so successful with government, I mean much more successful than others?

Because we knew how to play the game, and the other thing is we actually could make heroes out of the bosses that we were selling to because we delivered, and information technology development over the years are fraught with failure. Every bank has had a big bang that when

black, even now, boards sit around tables and talk about the disasters that went wrong, and it's always IT&T, so there you go.

So it's a book about software failures.

Well there you go, and I don't know if it's any different now but certainly in my day, and these companies, mind you nobody was ever fired, they would just be let go, make all the money, and go somewhere else and do the job. We were actually famous for making the people that chose us, often against the tide, successful because oh, on budget, might not have been on our budget, but it was on theirs, particularly if it was fixed-price, we always hung around to fix things, and sometimes we'd cock them up terribly badly along the way but we always fixed them. They worked, we were mid-priced, so I think governments, once you can get a little bit of goodwill and you get a reputation for making a hero out of a particular person, they all move, I mean every two years they all change jobs, they'll take you with them, and so we were able to penetrate. The other thing that we did do very well was partner spectacularly as underlings to IBM, to Fujitsu, because they didn't do services in those days, so they'd be the prime contractor on something and we would be very, and suddenly the department would say, oh shit, those guys are doing the work, so the next one they might come direct, and that was both state... the government here in Victoria when the internet was just starting, we won an unbelievable job with the Victorian state government and that's where we really were innovative. We were the first people to actually get a financial transaction to work over the internet in this state, just our clever techos did that, because the government wanted to put kiosks all over the place where people could pay their fines, and they had to be able to be some blind people, and this is going back in the early 80s, it was hard, but we made it work. We combined with NEC for that.

What role do you think serendipity, luck, pure chance plays in success and innovation?

I think the ability to grab hold of that serendipitous occasion is what I would call it. See, people say to me you're a strategic thinker, I'm a tactical opportunist. If something comes past me, call it luck, whatever, then I'll grab it, a bit like the chance remark at the party, and I think having an awareness of the opportunities that a piece of luck brings you and then being energetic enough to grab hold of that piece of luck and turn it into something that you look back and say well it wasn't really luck, it's the old thing, the harder I work the luckier I get. So I do think, don't get me wrong, I think if things like timing, if things like being in the right places is serendipitous, then they are terribly important. I mean Aspect could not be started today with the same business model, it was absolutely right, and I was right for the times, for people doing the sort of systems they were doing, the nascent, the nascent industry, the relatively nascent industry it was, starting to get commercial not just scientific and tech, so they're serendipitous I think is your timing, your place, and your geography, and then frankly it's grabbing those and then sensibly turning them into something that goes beyond just luck. And a lot of people cannot do that. Sometimes they're handed the nicest thing on a platter and well I think it's abusive because they just throw it away. I think it's such a shame.

We see a lot of it I think. Market factor, economic environment, is that, the background of the economy, how important do you think that is?

Well, it turns out, although I didn't know it at the time, because you don't remember, my first cheque I hadn't even registered the company. I mean how embarrassing is that, I didn't know you had to. I just turned up to the bank with my cheque from GRE Insurance and said can I put this in the bank, and they said no, you can't. I just printed some letterhead, had some

letterhead printed and away I went, so strategy was not one of my big fortes, but it turns out I realised later, that I was really, really clever at establishing Aspect in a recession.

Sorry, I missed that Lyndsey, you broke up a little bit.

Sorry, I was really clever at establishing Aspect in a recession, and I [*indistinct*] came back from me and didn't have anything else to do, so I didn't know it was a recession, but I do know that [*indistinct*], for example, when everybody was doing Y2K and made a lot of money, in some cases necessarily and in some cases not, we chose not to do [*indistinct*] so much work instead of concentrating on the easy-peasy things.

Sorry, you were good at what, being counterintuitive?

Yes, and countercyclical. When Y2K was the big thing and everybody was making a lot of money out of it we chose not to do it, we did it for a couple of friends, but so again, this goes back to doing things a bit counter to the norm, and so things like tough financial times, if you're energetic and you're prepared to pedal a bit harder, it can be a really big advantage.

Yeah, and you mentioned earlier about the Australian psyche and we're not networkers, we're not joiners I think you said, and a couple of other aspects, are there any other aspects to the Australian psyche, the Australian mindset, the Australian environment that are helpful or that hinder innovation?

Well, we do tend to put down eggheads, we tend to be a bit rude about academia, senior bureaucrats where some are, I've tried desperately over the years on my boards to have them look at senior academics that I know are, principal of schools, as board members, because these people run really complex businesses. Do you think I can get the average businessperson to take any notice? No. It's just really sad. So I do think we're very narrow-minded, this business where anything that's elite is to be judged as somehow crooked or sinister. I think we miss out a shitload because we're dumbing down, we're equalising, and I actually don't think we can be equal all around, and I don't just mean financially, I mean the layers of intelligence, we should be applauding those that are at the top of the tree, and we do tend to denigrate it, even just colloquially. So I think that that's a really poor trait of Australians. And whilst we're famously anti-elitist and famously everybody gets a go, I don't actually think A, that it's true, or B, that we are advantaged by it.

Any other factors that you think adversely affect or help innovation?

Well, one of the things that my son actually pointed this out to me, he was in Silicon Valley for three years and learned a shitload, he said a lot of the Australian entrepreneurs in IT that have done really well come back and put their money in real estate. Not that many of them actually go back in and back IT ventures, to any extent. They might do a million here or half a million there, and the C type capital, but none of them have ever taken a whack. It might go in overseas, it might go into Tesla or autonomous vehicles or whatever, but there's not been anybody that's really done serious, George Kepper was probably one of the ones, and the orbital engine man, what was his name? I've forgotten his name.

Ralph Sarich.

Yeah, Ralph Sarich, they are, I think they are well known for putting, and they had substantial portions, they were well known for putting sizable amounts, most go into real estate.

Because it's easier, there's more money there?

Yeah, more money. It's guaranteed in Australia. Yeah, you can go bad with real estate, but you look at the rich 200 list every year, I reckon two thirds the money is real estate. Even if it didn't start off, even if they started off manufacturing bottles, the fortune is made with real estate.

Now that you go back with the benefit of hindsight, what would have helped you to grow or to establish you better? What kind of framework, support could have helped you, or did you think it was all good how it turned out to be?

I've thought about that because I suspect I would have rejected it if there had been some sort of help. I didn't need a large amount of capital, and so it started off as a services organisation where I was able to do it all. I had a husband who could support me. There's all sorts of things that make this if not unique, it gives me a perspective that might not be realistic for others. And then one of my passions, because I grew up without very much and I'm financially very conservative, except in my angle investing, I always said I would borrow to survive but not to grow, and we never borrowed a penny and never had an overdraft. I mean there were some tough times in this space in the late-80s and early-90s, where fortunately we were distributed enough around Australia to be able to support the staff here in Melbourne that would have otherwise, we'd have to let go, so there was again some good balancing going on, and so I've often wondered would the company be ten times bigger if you'd gone and sought some sort of capital or a partner or something like that, but it didn't, there was never the need, and I think I would have been driven by a need rather than a nice to have, and that's me, and Peter was the same. Fortunately, in a partnership, we were absolutely aligned on everything. That's why it worked so well, and neither of us ever bled the company, we never took large dividends. I think the first dividends we ever took was probably 15 years in, but again, we could both live off the relatively small salaries we paid ourselves. I don't know what would have happened. I think actually it was put down to having some adventurous early customers who said we'll give her a go.

And was there any big mistakes you made that you learnt lessons from? Any one mistake, standout? I'm sure you made lots of small ones.

Opening an office in Perth. Oh, that was shit. Not really, I mean you can look back and say that was a bad hire or we shouldn't have got involved in that project, it was destined to be bad to start with or there's a lot of things that I could point to. I bought the wrong building whereas I should have bought the bigger one, but there was nothing cataclysmic, I think that either put us at risk, probably that goes back to my natural conservatism, there was nothing cataclysmic that we bet the farm, or that put us at risk to be really seriously in danger. Mistakes, not really, I don't think so, because we were an evolutionary company. You asked me about innovation and I had to disappoint you, we were very evolutionary, rather than revolutionary. Each month we'd be a bit bigger than, when I started off in the first couple of years by myself, I think I had 12 or 14 people by the time Pete joined me, we did always within our own cash flow. The big risks were hiring ahead of having work for people because you had salaries, but we found it, we scrounged it, we did things. So, I can't really say.

What about a slightly different question, what are your disappointments, if any? Regrets you've had a few. Anything really disappoint you about your career or about the IT industry as it's evolved?

Hey look at me, I'm fabulous, what disappointments. For god's sake.

No, not with yourself, with the industry as such.

Oh, there's one child that gives me a lot of trouble, no, my kids are gorgeous, despite the benign neglect that they lived with because they didn't see much of me, I was at work the morning I had them and I went back to the work the day I got out of hospital, so the poor little bastards. When I was having my second child the nurses came and said to me what do you do? I told them and they said oh, we're so relieved because we've never had a mother that's had so many young men visit her. I was running it from the hospital bed. You've got to. Sorry, regrets...

Regrets, disappointments say...

Regrets, look, I think selling the company was the right time for me, as I said, 30 years of worrying about payroll or however long it was, nearly 30. You can't, the due diligence as a, the enquirer can do more due diligence on a target than vice versa, and I think for my staff, it was easy for me because I just popped onto the board and became a non-executive and found it very frustrating, for most of my staff my big regret is that some of them have never forgiven me and they still say, why, why did you sell us? Because they loved it, they just, and I still get emails saying you were the best boss I have ever had. Pete gets them. I still have people saying never worked anywhere else but Aspect that was so much fun, we worked our people like banshees, we were terrible, when I think about it nowadays I'd be a bully, but oh I would, oh god, I used to, I'd publicly berate people, I was very good at apologising out loud, so I think if I had to look back the one regret that I still would have done it because, although over the years we'd had offers, either the time, we were adamant if we were ever going to sell it had to be Australian, it had to be complementary, not competitive, because complementary you make sure your staff keep jobs. When you're competitive they get rid of, and KAZ did not do development services, it didn't do application services, it didn't have software, it was managed services, it was selling boxes, it was managing IT infrastructure. So it was a perfect match. It was public, so my staff could have the reward of some sort of liquid shares, it was just right, it just was not a good move, it was disappointing culturally, look, they always are. I mean I've been involved in so many MNAs as being a board member, etc, and they're usually shit, and then it got sold to Telstra and then it's at Fujitsu, and my sister who's been there all the way through finally finished at Fujitsu last week.

Really?

After about 40 years.

Who was that sorry, you said your sister?

My sister finally finished with Fujitsu after about 40 years, so I think that's the only regret that it wasn't, but looking back it wouldn't have mattered what we'd done, it was always going to be a disappointment to our troops.

Yeah, that's great Lyndsey, have you got any other questions Sebastian?

Only one thing you mentioned before, you were going on about industry society AIIA.

AIIA, yes. Yes, you said there was too much international representation for an Australian board or...?

No, they funded it, their subscriptions were based on, it was based on turnover okay. So the likes of an IBM and Fujitsu, clearly, it's probably like the Retailers' Association without

Bunnings, clearly the influence they rightly should have was not necessarily at odds. I was vice chairman but I was not prepared to be chairmen and represent the AIIA view in a lot of circumstances when I was promoting so heavily the Australian made, Australian owned, Australian developed. So no, no, they didn't, in fact they were marvellous. Those companies I have to say they did so much in terms of putting into the industry, and for companies like mine they were very supportive, but no, it was just the funding balance Sebastian.

Okay I get it, I understand the distinction that you're making, yeah.

So it was appropriate that, yes. I was happy to chair the ACS, the Australian Computer Society which had a different agenda and that sort of thing.

Yeah, do you have anything else to add?

No, I can't think of anything to add except that I despair that it is still not an industry that women understand how fabulous, how unbelievably fantastic this industry is for everybody, but particularly for women in the ways of working in the pay scales, I mean it was born modern so the opportunities, especially in my day, punched above their weight for women, there were project managers that were women, you didn't get that in a lot of other industries, and I still despair that there hasn't been able to overcome this nerdy, it gets a bit back to, people still think it's an industry where you don't deal with people. It's bizarre, I don't want to sit a dark room writing programs. What does that mean?

That's a point that Anne Moffatt has made very, very strongly.

It's very sad because they are fabulous employees, they were by far, I don't know if they were any better at producing a system, but they were equal to it, I mean I'm not going to say one group was better than the other, men or women, but there was not a single thing wrong with women being in this industry and I just had no clues. I think it goes back to the parents, it goes back to the schools, it goes back to, and it's not just about STEM, although Australian does need more of that education, there is no question, you've only got to get vaguely passed to be a bloody maths teacher to get into uni to be a maths or science teacher, I mean, it's terrible. Mind you, we don't pay them enough so that probably doesn't help. So yeah, I think, and to answer your point it's very important that we get the choice of the best possible pool to fish in. It's hard.

Maybe then a bonus question because you're passionate about this, what could we do to get more women into IT? What are your thoughts around that?

I think you're starting to see a few entrepreneurs, like the Canberra woman and that sort of thing, I think that might make a difference when you start to see more and more people, I mean people use to say that I was an example, she is an example because she is young and she's good looking and that sort of thing, but I actually think, I don't know what you do. You go into girls' schools where there's at least a cohort of interested teachers and parents and you tell them what a good occupation it is. They can work part time. They can have families. They can earn good money. They can travel the world. I think it goes beyond what the day-to-day job is that's going to turn them on. It's quite sexy.

Oh, it is. Look at us.

Most of the folks you meet are not, but that's beside the point.

Some of us are Lyndsey.

I wouldn't be selling the matrimonial options.

That's great, probably a good place to end, thanks so much Lyndsey for your time today. It's been fabulous, really.

If you've got any follow up questions, just come back to me.

Well, I'll be calling you up on the biography for...

People say it's so much easier because you can market on the internet, you don't have to spend, one of things that I did not have, apart from a company to start with, there was no GST, there was no, I didn't have to get an accountant until I was about ten years in and you could do a spreadsheet or equivalent thereof and give it to your accountant at the end of the year. The red tape in terms of actually starting a business and then running it and accounting for it, just that, forget actually getting going with the business, the first thing you've got to do is hire, is start paying people to do your books because they are complicated now, and it was, these again are the sorts of things that I think are inhibitors apart from filling out those forms that you talked about.

Thank you.

End