



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON SCIENCE AND INNOVATION

Reference: Business commitment to research and development in Australia

FRIDAY, 7 FEBRUARY 2003

BRISBANE

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON SCIENCE AND INNOVATION

Friday, 7 February 2003

Members: Mr Nairn (*Chair*), Ms Corcoran, Mr Evans, Mr Forrest, Ms Grierson, Mr Hatton, Mr Lindsay, Mr Tony Smith, Mr Ticehurst and Dr Washer

Members in attendance: Ms Corcoran, Mr Evans, Mr Lindsay, Mr Nairn, Mr Ticehurst and Dr Washer

Terms of reference for the inquiry:

To inquire into and report on:

The international comparisons indicate that while the public sector in Australia supports R&D at an impressive level, business investment is less impressive.

With particular consideration of:

the R&D drivers in small and medium sized business;

the needs of fast-growing companies; and

the considerations by which major international corporations site R&D investment,

the committee seeks to address three questions.

What would be the economic benefit for Australia from a greater private sector investment in R&D?;

What are the impediments to business investment in R&D?; and

What steps need to be taken to better demonstrate to business the benefits of higher private sector investment in R & D?

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Committee met at 2.44 p.m.

BARBER, Mr John W. R., Chief Executive Officer, Sigtec Pty Ltd

BOULTON, Mr Brian, General Manager, Universal Forme Pty Ltd

CHAPPLE, Mr Stephen, Economic Development Manager, Frankston City Council

CROSSING, Dr Richard James, Manager R&D, Roma Food Products

FERGUSON, Ms Suzanne, Economic Development Manager, City of Kingston

FITZGERALD, Mr Peter, Commercial Development Manager, Wickham Tooling and Plastics

RANKIN, Mr Scott William, General Manager, Australian Cellulose Insulation Manufacturers Association

RATCLIFF, Mr Mike, Managing Director, Temptation Bakeries Pty Ltd

REABY, Mr Brett, Managing Director, Phasefale Pty Ltd

ROLLS, Mr Phillip Owen, Managing Director, RollsPack Pty Ltd

CHAIR—I welcome and thank you all for taking the time to be part of this teleconference. As you are probably aware, the committee has now been conducting this inquiry into private investment in research and development for quite some months. We have conducted a number of what I would call formal public hearings, predominantly in Sydney, Melbourne and Canberra, where we have received submissions and taken evidence. At the completion of those hearings, the committee decided to have a look at where the submissions and evidence had come from. We felt that there probably had not been a good enough cross-section from small and medium sized businesses. As a result, we decided to conduct a number of roundtables.

We conducted a roundtable discussion this morning in Adelaide and are now in Brisbane and will hold one here later this afternoon. Ann Corcoran, the deputy chair of our committee, asked the people in Melbourne whether we could get some additional evidence, so to speak, from a number of companies there. That is why we are taking evidence via this teleconference. This is probably a bit of a first in the sense of doing a roundtable via teleconference, but I am sure that with a bit of order we can make it productive. We found the roundtable this morning extremely productive and certainly it has helped us with our thoughts following the various formal submissions.

You have probably also been told—but I will state it just to make sure—that, while effectively this is a private conversation between the committee and businesses, we are recording it in *Hansard* and, once published, it will be available for public viewing. That means that any information you give today will be made public. If somebody wants to provide the committee with particular information but does not want that information to be made public, we would have to come to some arrangement about it, particularly as we are proceeding by way of

teleconference. Normally we would take such information by private proceedings at the end of a meeting, but clearly that is not possible at the moment. So if at the end of the hearing someone thinks they need to do that, they could talk to us and we would work something out.

We only have about an hour this afternoon. Each of the participants in Melbourne will first be given an opportunity to give a bit of an introduction. Keep it as short as possible; two or three minutes is really all we can allow. You have been provided with a variety of information about the inquiry and some of the issues and, if there are particular things that you would like to raise with the committee as part of that introduction, do so. First, we will have each person's introduction and then we will proceed to discussion. Because of this being a teleconference situation, please identify yourself before making your comments. I have a list in front of me—I am not sure whether you have the same list—and I will start from the top. Would Mr Phillip Rolls from RollsPack Pty Ltd like to commence?

Mr Rolls—Good afternoon. RollsPack Pty Ltd is located in Braeside, Victoria and employs approximately 45 people. We are a flexible plastic packaging and printing manufacturer involved in manufacturing products like courier satchels and security products such as single-use, tamper-evident satchels for Brinks, Chubb, Armaguard and banks; printed carry bags; industrial printed polybags and printed rewind for food and industrial packaging. We are endeavouring to market and sell our products into South-East Asia and China. We compete against European and US companies, some of whom spend \$US36 million on R&D. Our turnover is approximately \$8 million and we fund our own R&D. I have a submission and will email it to you for your later consideration.

CHAIR—Mr John Barber from Sigtec Pty Ltd.

Mr Barber—Good afternoon. I have made a few notes and I will just run through them. Sigtec Pty Ltd was established in 1982. Our head office is in Seaford, Victoria.

Sigtec has always specialised in the field of mobile data communications. This is a high technology area providing customised turnkey solutions for fleet command and control systems, including fleet dispatch and vehicle tracking via GPS.

Sigtec develops its own mobile computing technology and applications software packages. Sigtec's wholly owned subsidiary company is Sigtec Navigation Pty Ltd of Canberra, which specialises in the development of GPS receiver technology. This technology is licensed to international microchip designers for GPS integration into cellular phones, PDAs and other applications. Sigtec markets its mobile data systems worldwide into the transport industry, with particular emphasis on taxi, courier and freight/logistics fleet management.

Sigtec invests approximately \$1 million per annum in R&D—representing approximately 10 per cent of turnover. Virtually since its inception, Sigtec has been a beneficiary of the federal government's R&D grant schemes. We have had two project grants. The first was for a moderate amount in the 1980s. The second was under a Start grant commencing in 1998 and concluding in 2001. The grant represented 50 per cent of funding for a \$3.8 million project called Project Transcend. In between these grants we have claimed, and currently do claim, general R&D tax concessions.

R&D is, of course, inherently a risky investment but it is a fundamental wealth generator for companies and the country as a whole. Those businesses who already recognise R&D as a necessary cost of doing business would value further incentives to increase their R&D efforts and those that yet do not should and would be given every encouragement to invest in R&D. A culture of innovation is possible to foster and institutionalise.

We have no real criticism of the R&D schemes as they have been applied, except that, in so far as R&D grants do have a huge bearing on a company's decision to invest in R&D, the levels of incentive should be as high as practicable. We think the current mix of cash grants and tax incentives, in principle, is a very good arrangement. Dollar-for-dollar project grants are good and should be retained and enhanced. The current 125 per cent tax incentive and 175 per cent incremental R&D tax incentives are inadequate. A 200 per cent tax incentive for general R&D, in our opinion, would also prove far more effective in encouraging more R&D. However, the problem with tax incentives is the delay in receiving cash flow benefit.

We have been kept well informed of IR&D schemes and their latest status through AusIndustry's monthly information bulletin. AusIndustry has also been most helpful when we have asked for its assistance. Overall we have found the implementation of the IR&D grants program to have been rigorous but not onerous and to have been well administered.

CHAIR—Thank you. You have told us that a lot of what you have just said is written down.

Mr Barber—I have it all written down, yes.

CHAIR—Every now and again your voice cut out. We pretty well got the gist of what you said, but some of the exact figures and things like that may have broken up. We will organise to get a copy of what you have written down, as it will be useful for *Hansard*.

Mr Barber—No problem.

CHAIR—Thank you. Mr Brian Boulton from Universal Forme Pty Ltd.

Mr Boulton—We are a privately owned company. We manufacture a range of gasket seals. Our major customer base is automotive. In the last 18 months we identified an opportunity and in the last year we have been positively assisted with an R&D project under your R&D Start.

CHAIR—Is each person holding the telephone or speaking hands-free?

Mr Chapple—We have a three-way microphone group arrangement here, and it is obviously not adequate. It has microphones in three directions. Is that any better?

CHAIR—When you say that, it sounds fine. It seems that after you start to talk the odd word drops out. We will persevere. I think the problem is to do with the microphone at that end. We have to ask you to be as vigilant as possible and speak into the microphone as directly as you possibly can.

Mr Boulton—I will do my best. There are certain issues that we have come up with—and these might sound trifling in some ways, because the whole experience has been a positive one

for us. We found that, in dealing with AusIndustry, ACIS and R&D Start, there is some inconsistency in the recording of data and the calculations of costs. I could give examples of that, if you want me to. The systems are not quite the same. Secondly, the regulations seem very complex. We found that, while the R&D Start staff are extremely pleasant and helpful, it was noticeable that at times they struggled to understand the regulations and frequently had to refer to a big book of rules. We also found—and we probably have a fairly regular collection of businesspeople and accountants at our business—that some of the definitions used in the R&D documents are unusual. For example, they refer to production value and, when we analysed that, we realised in our terms that would mean invoice value or sales value. However, overall, as I say, our experience was very positive. The staff were always very helpful, although at times they seemed to be battling somewhat with red tape.

CHAIR—That was certainly better microphone wise. We got all of that, thank you. We will probably come back to some of those things you have raised when we have given everybody a chance to introduce themselves. Scott Rankin from Australian Cellulose Insulation Manufacturers Association.

Mr Rankin—I am from Battmans Insulating Services, which is ACIMA, the Australian Cellulose Insulation Manufacturers Association. Hello, Ann. I am in your area. I am in Carrum Downs.

Ms CORCORAN—Good afternoon.

Mr Rankin—Good afternoon. Battmans Insulating Services manufactures and installs a range of insulation materials here in Victoria. We have around 25 staff members and a turnover of around \$5 million. Our need for research and development mainly comes from overseas goods coming into Australia and threatening the market that we have in Australia. Although we have not gone for any research and development grants, when we have had a need to do research and development we have simply undertaken to use our council—Frankston council—our politicians who know people in the industry, the CSIRO and other privately run R&D companies. We have never had any impediments in our way, other than the costs of research and development. We have used associations to disburse the costs if other businesses can benefit from the R&D. When we are looking for solutions, the thing that I look for in relation to R&D is a commitment from other companies, especially Australian owned companies. If we are threatened by overseas imports, there seems to be a willingness by others to make Australian products compete. The enthusiasm of especially the Frankston council and our politicians to make sure that we make the best possible product at the cheapest price has always helped us to overcome any hurdles that we have had or encountered in our period of manufacturing.

I ask your committee to keep encouraging people to make Australian owned products to the highest standard and, by doing so, that filters down into the workplace. When people come across materials or products that come from overseas, they buy Australian owned products. When that is in our workplace and people know that they are competing against overseas products, their productivity levels lift because they fear their jobs might be on the line. Also, there is that pride in being Australian.

I would like to put on record what a great job our council does, particularly Steve Chapple and Darko Popovski. By having a proactive and enthusiastic council, when we have a problem

it is their enthusiasm in the way they want to solve our problems that really makes us find solutions quickly and efficiently, so they deserve a lot of thanks.

CHAIR—Thank you. The committee is very pleased to hear that there is a very proactive and efficient council helping you out. Dr Richard Crossing from Roma Food Products.

Dr Crossing—Roma Food Products is a small to medium sized business. We have about 30 to 40 staff. We manufacture high-quality alternative grain products that are wheat-free and gluten-free. Our market is essentially people who are health conscious, have some dietary problems or are allergy sufferers. We serve a niche market that is constantly increasing, but it is very competitive. Our comment on the needs of business R&D is that we should look at developing a better framework that exists for R&D in the private sector.

CHAIR—Mr Ratcliff of Temptation Bakeries.

Mr Ratcliff—I am the Managing Director of Temptation Bakeries, a small bakery with 35 employees. It is owned by my wife and me. The company has been in existence for about 12 years—nine of them under the current management. We make gourmet pies and other savoury products for supermarkets and department stores in Victoria, and we supply one product nationally through Safeway. The second leg of our business is snack cakes for Qantas. We have done about 50 cakes, slices and other variations for Qantas in the last four years. Our sales have grown tenfold in the last nine years, and we relocated into an export standard premises about three years ago.

We spend about two per cent of our turnover on R&D, and as a small company we are finding that our R&D spend is competing with our QA spend. We are customer based and have had to chase HASEP and ISO 9002. I have had experience working as a technical manager with Uncle Tobys, so I can see R&D from a multinational's perspective and from the perspective of my own business. Regarding our major R&D needs, we put an enormous amount of product development time into supplying Qantas frequent flyers, who want to change cakes every couple of weeks. A major theme of our research and development is increasing shelf life. We have taken the shelf life of one product from one week to a month and increased sales tenfold. There is also reduction in labour costs and the production of low-fat products for today's consumers.

As I said, I was technical manager for Uncle Tobys. I think it is good that the committee is looking at small business. In my days at Uncle Tobys we had a purpose-designed R&D centre that was physically separate, a team of scientists and a big budget. Despite my experience, my own R&D development in my own company has been painfully slow and extremely uneven. It is important that the difference between large business and small business is known.

What we call R&D is not totally new information, but if we go to CSIRO or the Food Research Institute at Werribee, whether they have done that shelf-life trial once or 10 times this year, we will still be asked to pay in the tens of thousands of dollars to have that research done. I am looking back to the days when there was research extension as well as research and development, because I think a lot of small companies would be helped if the existing knowledge base was passed around—if a person knocked on the door and had a brief discussion. A lot of small company R&D problems would be solved if there were some roving

extension scientists who, on an intermittent basis, would drop in for a cup of coffee and talk through known scientific stuff for a couple of hours. I have had some experience with that.

My first job out of university was as a dairy research officer and extension officer. We used to go around to the small non-cheddar cheese factories in Victoria, the so-called fancy cheese people, and pass on known research and development. It was amazing how the small companies would pick it up and change their procedures, and they were very grateful for the advice. If something like that could be spread into the non-primary industry area, there would be a lot of progress for very little money spent.

CHAIR—Thank you for your thoughts. We will now go to Mr Brett Reaby from Phasefale Pty Ltd.

Mr Reaby—Phasefale design, develop and manufacture control systems for refrigeration and airconditioning. The company was founded in 1970, and since about 1980 we have been part of the R&D scheme. Initially it was a cash grant, and then in the late eighties, I think, it turned into a rebate on your tax. At that stage, I think it was 175 per cent. It then dropped back to 150 per cent and it is now at 125 per cent. I have personally put the R&D grant together every year since 1980 and I find that, at 125 per cent, it is barely worth the effort, considering the amount of work that needs to go in to make a proper submission.

If the government analyse what is going on with that money, they will find it does not actually cost them a lot of money to allow that to occur, because it is only a tax rebate and any money that the company can save in terms of tax is kept within the company. As soon as the company wants to take that out as a profit result to the directors, they need to pay full marginal tax on it. So the fact that they are getting a tax rebate is fine, but it is only a benefit to the company as a cash flow issue, rather than a cost to the government of a direct tax. If the government look closely at the cash flow, they will find it does not really cost them that much. I really feel that 125 per cent is too low to make it worth while. It is particularly annoying to see that new companies now can come in and gain 175 per cent on a low base, whereas we have been trying, since 1980, to maintain a steady R&D commitment which is at least 10 per cent of our turnover, and we are committed to that, whether or not we get the grant. We think 175 per cent for any incremental R&D is a crazy system.

Also, in the type of business that Phasefale is in, where we are designing and building electronic circuits, we had an example the other day where, for a design that works fine and we were in production with, the component manufacturers from overseas have discontinued the components that we have been using in the design, so we are forced to redesign the product even though we do not want to. Electronics is a fast-moving game and if you do not design and develop you are out of it.

CHAIR—Thank you. We might come back to some of those matters you have raised as well. Now we will listen to Peter Fitzgerald from Wickham Tooling and Plastics.

Mr Fitzgerald—Wickham Tooling and Plastics are toolmakers and plastic injection moulders located in Braeside. We were established in 1968 and we have a turnover of around \$10 million or \$12 million, I think, this year. We employ 70 people over three shifts. While the majority of our work is original equipment automotive supply, quality standards required also allow us to service sections of the medical device industry. Hence, we have become involved in R&D of

safety products for the medical fraternity and we are registered for assistance through the taxation concessions. We have found it to be a most suitable form of assistance because we have great difficulty in estimating, at the beginning of a project, the end costs in terms of money or development time. These things tend to go on, not only for months but for years. In our case, R&D is not the main priority of the business. It is fitted in with a busy production cycle, so we are pretty much on and off as far as research and development goes.

In our company, as with most small business, R&D is conducted by key personnel. The same people seem to make the initial applications for assistance, keep the financial records, submit the annual application for registration and compile the costs for the taxation claim. They tend to get quite embroiled in the whole thing—I do, particularly. As our R&D expense is fully funded by our company and there is no contribution through sales, we are effectively claiming 100 per cent of the standard business costs, although the concession allows us to claim only 25 per cent—and there's the rub. We feel, as the previous speaker mentioned, that the cost of getting all the information together is really not worth the 25 per cent. We would dearly like to see it a little bit more than that. Nevertheless, we are in there and we are going to stay in there but it would be a great help to have a larger contribution by the government. It would be most accepted. That is about it from me.

CHAIR—Thank you. Is there anybody that I have missed down there, just to make sure that our list is right?

Mr Chapple—No, you have covered everyone.

CHAIR—We will now try to pick up on some of those points and pursue them.

Ms CORCORAN—I have two questions. Firstly, Dr Crossing, I was interested that you said, almost in a throwaway line at the end of your discussion, that you need a better framework for R&D. Do you want to elaborate on that a little bit?

Dr Crossing—Yes. Roma Food and maybe some other SMEs would admit that the processes that they have within their firms for determining R&D needs, the decision-making process that they go through to undertake R&D and how they would even monitor the management of administrative costs to see where R&D expenditure is going, could all be improved. So the cycle for SMEs undertaking R&D and availing themselves of government grants et cetera could be improved. I think there are a number of points about which SMEs are not as aware as they should be. I do not think they are as professional as the large corporations in tapping into this cycle. If you have a look at the food innovation grants that the Commonwealth has at the moment, there are some very good tools there that SMEs can use. There are decision-making funnels and so on. Things like that are of enormous help. But I think we need a project in which impediments to business R&D can be looked at. A number of tools could be developed and made available to that sector to improve their private R&D investment and their access to government funding.

Ms CORCORAN—Are there any recommendations that this committee could make in its report that would help that process? You may be able to answer that now or maybe you might want to think about it and get back in touch with the committee at a later stage. What we have to do next is write a report with all sorts of recommendations in it. If we want to address that issue, what would you suggest we put in it?

Dr Crossing—I think that small and medium sized businesses looking at making an investment in R&D probably do not visualise the risk as accurately as they could. That would be improved if they had someone or some tools available to them to make a proper assessment of the risk—that is the first thing. The second thing is that they are likely to think that the return on their investments is uncertain or likely to be very small, so it is not worth the risk. I think there are ways that this could be looked at to capture all of the costs that are involved and to enhance that investment to make them more confident about putting dollars into these things.

Ms CORCORAN—My second question is to Mike Ratcliff. I have not told the committee yet that we enjoyed your cakes on the plane—they all know now. I wanted to explore your idea of the roving scientist a little. I am just wondering if that happened informally, if it was fostered by somebody or if there was an overarching organisation. Can you tell us a bit about how it happened?

Mr Ratcliff—The basis for my comments is what used to be called the Gilbert Chandler Institute of Dairy Technology down at Werribee, which has now been rebranded and repositioned as the institute at Werribee. In my youth, small business and user-pays were less clearly defined than they are now. We were jacks of all trades and, as I think CSIRO would have argued, masters of none at that stage. But we did go around, as part of our charter, and, almost like a doctor's consultancy, ask how things were going and whether there was anything we could do. That era coincided with the fastest growth of non-cheddar cheese varieties in the state. The people were not charged for this service, but they did not overuse it. There was some variation in how useful it was regarded to be—it depended a bit on the technical standard of the person you were talking to. In my new situation—running a family bakery, albeit with 35 people—I think that if the people from the Bread Research Institute or the Food Research Institute at Werribee, or maybe an additional employee, went out and took the known information to the businesses, a lot of what passes for R&D may already be known.

Taking Richard's comment, when you are in small business you are trying to gradually get rid of hats. As I have grown my business, I have thought, 'Oh well, I only have to wear three hats now instead of seven.' Our major requirement is to increase the shelf life of our product. We have had an inquiry out of Singapore in the last two weeks for long-life muffins, which is going to take an enormous amount of work to do. But I am sure someone out there knows it. I am wondering whether this group of experts in the industry may jump-start a whole lot of rapid development and answer questions that small manufacturers do not even know they have. The spin-off benefits and the multiplier effect could be quite startling.

Ms CORCORAN—Thanks for making that good point.

Mr TICEHURST—I have a question for Brett Reaby. Brett, you were saying that the work on the submission was hardly worth the effort when the tax rebate is 125 per cent. But in order to increase your sales, if you forget the tax side of it, would you carry out the R&D in spite of that sort of problem?

Mr Reaby—To be honest, I have often thought that, with or without the R&D grant, we would just continue on at the same level. It is nice to get the rebate at the moment but getting it is a fair bit of work; it is like another job to get that money. We are self-funded, so we do not rely on it to do the R&D.

Mr TICEHURST—I quite agree with that comment because I think many small businesses do not have the experts to do the submissions. From your point of view, then, what could we do to improve the submission process and make it easier?

Mr Reaby—I forgot to mention that I did an ABS, Australian Bureau of Statistics, questionnaire on R&D. I am not sure whether everyone else has done it too. It had a whole different set of questions and calculations than the standard AusIndustry one. In other words, I cannot use the AusIndustry submission to get the numbers to fill in the ABS data.

Mr TICEHURST—That does not surprise me.

Mr Reaby—It would be very handy if the ABS form asked the same questions as we have already collated answers to for the AusIndustry submission. It is very difficult when they talk about ‘technical innovation’ and ‘technical risk’ and all that sort of stuff. When you are writing up your project, it is very difficult to separate out, in a project sense, what is a risk, what is an innovation, what is this and what is that. You have to get a little creative with that. Really, I would prefer to have a longer submission talking more generally about the project, the problems and the way you got around them.

Mr TICEHURST—Fair enough. We have heard other people talk about definitions and the differences, but you have raised a couple of good points. That is something for us to look at.

Mr Reaby—Thank you.

Mr LINDSAY—Brett, what is the discontinued component you cannot source overseas?

Mr Reaby—It is as simple as a little memory chip. It is a \$2 component, but it goes into a \$500 circuit board.

Mr LINDSAY—Scott, you mentioned the role of local government in helping SMEs. Can you expand on how you think councils could do more and on what you think they should be doing?

Mr Rankin—I will go back to the point that Mike made about people going around and helping you. The reason for having research and development in industry in Australia is to export more product overseas. We will all do our research and development anyway, because we need to do it for our companies. But while we have to do our research and development, we have these problems. We have to find the cheapest way to do it. We do not make any R&D claims either, because the 100 per cent tax is good enough for us. It would take us too long to do the work and to get any benefit back. We are a small business, so we do not have the manpower or the time to compete with large industry in that way. What I do, then, is to go to the best sources that are available. I know that if I ring the Frankston City Council, it has a list of all the businesses in the Frankston area. If it does not have it, someone from the council will ring Dandenong or Moorabbin and will find somebody from those areas who has something to do with what I am looking for. It is really just investigation. I keep phoning the people whose names I have been given until I get somebody on the end of the line who will give me that information free.

Mr LINDSAY—So the councils do not give you any financial assistance?

Mr Rankin—No.

Mr LINDSAY—Steve, when I ask these questions, people around the room can put their hands up and you can tell me how many people have put their hands up. How many people there export?

Mr Chapple—Five.

Mr LINDSAY—How many participate with cooperative research centres?

Mr Chapple—One.

Mr LINDSAY—How many participate with universities in their R&D?

Mr Chapple—One has in the past.

Mr LINDSAY—I would like to know why such a small number of you seek technical advice, help and innovation from universities and CRCs. Does everybody know what a CRC—a cooperative research centre—is?

Mr Chapple—They do now.

Mr LINDSAY—Would someone like to tell me why it is that SMEs do not go near those sorts of institutions?

Dr Crossing—Take Roma Food Products, for instance. We would say that we know our business. For us to engage with a CRC, we would have to be convinced that they could, individually and in a competitive environment, absorb the needs that we have, go away and do the research then come back to us with the results. We would prefer to do the R&D on site ourselves, in a hands-on way, so that we would possibly be recruiting people with special skills who would be part of and stay with the company. They would be trained while they were working there. We would develop new product, install new machinery and so on. It would be essentially an on-site, hands-on process.

Mr LINDSAY—That is a good answer and I thank you for that.

Mr Boulton—I would like to make a comment on that same subject. In our particular field we regard ourselves as innovators and, to a fair degree, as leaders in our field. When we come across an idea we guard it jealously and we would be very reluctant to share a new development with a central institute where there could be a flow of information in other directions. I think this would apply to a lot of small businesses, but if we make an advantage for ourselves and differentiate ourselves in the market then that is our reason for existing for the next couple of years.

Mr Barber—I have a very quick comment. I agree with both the gentlemen's comments there. But for what it is worth, I think that the small SMEs are pretty fast moving. They are dynamic organisations and perhaps their time frames of movement and decision making might

not necessarily match those of larger institutions. The cost of interfacing under those circumstances can be very high and very time consuming. That is just another comment.

CHAIR—That is a good point.

Dr WASHER—Steve, I want to ask you a question. The economic development officers—and I guess you are going to agree with this—seem to be doing a good job in most cities, and we have got them in the West too. One of the problems I perceive or which we seem to be getting here is that changes in government in respect of CRCs, for example, and university structures—which we are encouraging—are not getting out on the ground to SMEs. Do you see that there is any way that we should be getting through to local government more directly—that is, from federal to local government—and making them aware of some of these new changes that we are incorporating that may help small to medium enterprises?

Mr Chapple—That is an excellent question and my response is yes. We believe that there is enormous potential for federal and local government to work much more closely in a whole range of areas—not just economic development. Suzanne, my colleague here, is also in agreement and she may wish to make a comment. One of the challenges that we have as economic development practitioners is, for example, that in Frankston we have 9,500 businesses, 92 per cent of which are small businesses. There is an enormous amount of important development work that needs to happen locally on the ground. If we can try and minimise not necessarily the red tape but just getting access to the information and also access to policy makers at a more rapid rate then I think that that is going to solve some of the problems.

CHAIR—We are having difficulty hearing you.

Mr Chapple—In answer to the question, Suzanne, myself and my colleague from Kingston strongly support the opportunity to work more closely with the federal and state governments, not just with economic development but across the board. We see opportunities to link more closely with what we are doing on the ground with the policy initiatives that are being developed in Canberra at a national level. One of the things that we are doing in our region is to work closely amongst ourselves as a region, not necessarily as an individual council. I think there are enormous opportunities to encourage economic development practitioners across the country to start working together with the Commonwealth government on a regional basis.

We are moving out of what we describe as a former parochial view and moving towards working together. We understand that by working together we have a series of interrelationships; we are all interdependent on each other. The region can be as big or as small as it needs to be. We are able to communicate very closely and very locally with our business community. I think that gives the Commonwealth government and agencies an excellent opportunity to link back into that skill and knowledge base.

Ms Ferguson—One of the comments was about small businesses being dynamic and needing to be fast working. The process of getting information out from a university can be too slow. So we, as economic development practitioners, try to be the intermediary and get the information out quickly on a one-to-one basis. We have a newsletters and we have means of communicating with the local businesses so that they can access it in a much more timely manner rather than the bureaucratic structure that exists in a larger organisation.

CHAIR—Thank you.

Dr WASHER—I missed some of that, Suzanne. I think you said that you also communicate with the universities or the publicly funded organisations that do assist business in the region or have the capability to do that. Is that true?

Ms Ferguson—In a small regard but, generally speaking, the processes that are in place in large universities make it very difficult to access any of the services. Small business needs to work quickly and just does not have the time to go through the processes that large organisations are involved in.

CHAIR—There are a couple of matters that I would like to raise but, before I do that, could you play with the microphone again. We will probably be able to interpret most of what has been said; we have the gist of it. First of all, would anybody like to comment on the ease of dealing with the tax concession, the 125 or the 175 for the incremental concession, as opposed to an R&D Start grant, the COMET grant or one of the other programs? Has anybody got experience of both and, if they do, could they comment on whether one is easier than the other to deal with?

Mr Reaby—From our own point of view, one of the issues concerning the R&D Start grant is that we find that some of our projects do tend to be a little open-ended. We start on a project and hope to get it finished in a year and half, various things happen and two or three years later we are still going on it.

CHAIR—I am sorry, it seems to be okay when you say a few words and then as you progress it deteriorates. I think you were saying that the problem you have with the R&D Start program is the open-ended nature of it and that it is very difficult to estimate a lot of things up front.

Mr Reaby—That is right.

CHAIR—With the tax concession, I would have thought that once you are registered and eligible for that that would be the more difficult part but then each year after that it would be fairly straightforward. Is that not the case?

Mr Reaby—You do need to go through quite a lot of calculations every single year. It is certainly a lot easier when you are used to doing it. There is quite a bit of collating of data. That is fair enough; you are claiming a tax concession.

CHAIR—We are running into difficulty with the sound now. It seems to have deteriorated substantially. It might be like a TV aerial: somebody might like to put a hand in the air or something.

Mr Barber—I might try changing the position because it seemed to work before. How is that now?

CHAIR—That sounds okay. Each time that happens it sounds okay but it then seems to deteriorate. We will persevere with it. I got the gist of what Brett was saying about there being additional work each year. Does anybody have a view on incremental tax concessions? At the

moment we have 175 per cent for additional research over a three-year period. I understand the criticism which was made earlier—I think it was by Brett—about new people coming into the market. They do have to demonstrate it over a three-year period and 175 per cent only applies to the additional research and development. What if there were several levels of tax concession—let us say, if we could simplify the red tape—depending upon the extent of research and development done? We would have to decide if it was based on a percentage of turnover or just on increases in dollar value. Do you think that a number of levels, which might go all the way up to 200 per cent, would act as an incentive?

Mr Chapple—The ultimate simplification would be, firstly, to recognise that we really should be developing an R&D culture in this country so that businesses, when they set out, genuinely look for innovation and are encouraged to invest in innovation. Most of the companies around the table here seem to do R&D because they have to. That is very common; in a lot of cases R&D is seen as simply a cost of doing business and keeping up to date. That is the minimalist position; that is not really taking ultimate risk. You want to push the balloon further, take some more risk and encourage risk taking. To me, a simplistic approach to that would be to give an across-the-board 200 per cent tax concession and have the R&D Start grant apply on a one for one basis to all R&D full stop. Having clear definitions, as you already have, is quite okay. Have risk and innovation properly assessed, but sympathise with our point of view.

CHAIR—Okay. I think we got a reasonable amount of that. You are coming into the area of definition et cetera, which is something that has been raised in other hearings. You mentioned culture. I think that a change in culture is certainly something that we would love to be able to achieve. I often ask, ‘How do you legislate to change culture?’ It is obviously very difficult. One suggestion that has been put to the committee is about the tax concession. Often in companies—admittedly it is probably in companies of medium size and larger—there is a fair gap between the people making the decisions about spending money on R&D and those on the tax side of their business, so a tax concession that is coming in is not seen by people in management positions and so on as being of any huge benefit. The suggestion was made that the tax concession could be grossed up and shown as income into the company. That way the direct benefit of the tax concession will be seen by people who make decisions about how much money should be allocated to the R&D budget. Has anybody got a view on that particular suggestion?

Mr Chapple—That is an interesting one. What would be the effect of that? Is it simply for PR purposes?

CHAIR—I guess it is in a sense. It was put to us by a major accounting firm and quite a large pharmaceutical company. I know that in small companies the person at the top knows everything that is going on, so it is probably not applicable in a very small company. The end result in dollar terms is the same and it does not cost the government any more. What it does is show an increase in income because of the R&D that you are doing. It gives the people who want to increase their R&D budget the opportunity to argue, ‘Look, there is the direct benefit that we get out of doing R&D.’ It is all part of trying to change this culture. Some people have complained that the number-crunchers at the top do not really understand the benefit that can accrue from research and development. If the tax concession were worked out to be \$200,000 a year, you would gross it up and it might equal additional income of \$300,000 a year on the profit and loss on the balance sheet.

Mr Fitzgerald—That figure involves—

CHAIR—I am sorry. The microphone has gone again. Unfortunately it seems that no matter which position the microphone is in we are going to have trouble. We are getting close to the end of our time. If anybody wants to give us any further written information on some of the things we have raised we would be pleased to receive it, maybe through Ann in Melbourne or through Steve Chapple. Maybe Ann can speak with Steve. If there are other comments that people want to make about some of those issues that we have just been talking about—we are having difficulty hearing—we would be happy to receive them. Unfortunately we might have to call it quits for today's hearing.

Ms CORCORAN—Thanks very much to everyone in Melbourne. We struggled at the beginning of all of this and we struggled towards the end but the middle was really very good. I want to say two things. Firstly, thanks very much, Steve and Suzanne. We have not heard from you very much, Suzanne, but thank you both for all the work you have done down there. Secondly, I thank all the people who have participated. Because we have had trouble towards the end, I will jump on the phone when I get back to Melbourne and have a chat to you, then I can feed the information into the committee on a more informal basis. If you have something you want to say in addition to what has been said today, that might be the way to do it. Thank you very much for all your help today. It has been great.

CHAIR—I echo those words. Steve, if people have anything already prepared we would appreciate it if you would collect it and send it to Ann or the secretariat. I think we confirmed at the start that everybody is happy to have that on the record. The committee will send copies of the *Hansard*, because clearly there will be gaps here and there that you might be able to help us fill in, and any other things that may have been misinterpreted will need correcting. As Ann said, it was a bit difficult at the start and the end, but there were some very good points and some quite new points raised today which we really appreciate. It certainly helped us substantially as a committee to clarify many of the issues in this inquiry. Thank you very much for your help today.

Mr Chapple—Mr Chairman and the rest of the committee, on behalf of our group, thank you for persevering. I am sorry it has been a bit frustrating because of the difficulties with the technology. A number of people here have quite a substantial amount of material, and we really appreciated being given the opportunity to speak today.

CHAIR—The line was not very clear, but I think we got the relevant bits of what you have just said: there is a lot of information down there. We will pass it on. Ann will be in touch with some of you, I am sure.

Proceedings suspended from 3.49 p.m. to 4.03 p.m.

ATHERTON, Mr Peter William, Managing Director, AWS Clinical Waste

BEATTY, Mr Robert Arthur, Chairman and Principal Engineering Consultant, RA Beatty and Associates Pty Ltd (Bosmin)

FERGUSON, Dr Alan William, Plant Manager, Bio Pharma Pty Ltd

GIBSON, Mr Roger Charles, Executive Chairman, Electrometals Technologies Ltd

GYURAN, Mr John Janus, Chief Executive Officer and Director, Bio Pharma Pty Ltd

HEILBRONN, Mr Graham Douglas, Chairman of the Board, The Heilbronn Group

LAWRENCE, Mr Shane, Associate Director, NBC Capital

LEHMANN, Dr Reginald Paul, Research Manager, Mediherb Pty Ltd

MURPHY, Mr Shane Michael, Director, Business Development, The Heilbronn Group

VALK, Mr Henry, Chief Executive Officer, HCV Wireless Pty Ltd

CHAIR—Welcome to this meeting of the House of Representatives Standing Committee on Science and Innovation. It is a relatively new committee of the parliament; it was constituted after the 2001 election. It covers the Industry, Tourism and Resources portfolio as well as the Education, Science and Training portfolio. Our first formal inquiry is this inquiry into investment in research and development, which has been going since about July last year. We have received about 80 submissions, and a couple of the participants here today made submissions to that inquiry.

We then held quite a number of formal hearings in Sydney, Canberra and Melbourne with various organisations and businesses that made submissions to the inquiry. Before Christmas, when we started to look at what we had covered up to that period, the committee felt that it really had not covered a broad enough cross-section of small to medium-sized businesses. If we are going to make recommendations to the government about things that the government can do better or can influence to improve the climate for research and development, thus encouraging business to invest more in research and development, we really felt we needed to know a little more from the coalface, so to speak.

The committee decided to conduct a number of what we call roundtable discussions. While they are private meetings—we have not invited the public along as we do normally with public hearings, because we felt it would be a bit difficult—we are recording the discussions in *Hansard*. Therefore, what is discussed will end up on the public record. You should keep that in mind. Also, if you have any particular facts or figures, or something that you feel might be useful to the committee that you would not want to see on the public record, we could get that information from you at the end of the discussions.

We call it a roundtable because I want to keep it a little more informal than normal hearings of the committee, where people come along, present submissions and then take formal questions and give answers. I want it to be more of a discussion; we held one this morning in Adelaide with about 12 to 15 businesses. The committee found it extremely valuable because we have been hearing and reading a lot of information over many months. It has been good to be able to talk about it in a discussion forum and get the sort of feedback that we did this morning and that I expect we will get this afternoon. In between time we conducted a discussion by teleconference with about a dozen businesses in Melbourne and we will finish off with another roundtable discussion in Canberra on Monday morning.

The way I would like to begin is to ask each of you to, in two or three minutes, give us a bit of background and a few comments. I know you have been provided with some information about the inquiry, about some of the issues that have come up during the inquiry and about the things that we might have an interest in. So, if you could in the first instance just give us a few minutes in that sense and then we will open it up to further discussion and perhaps my committee colleagues will ask a few questions. We will start, if we could, with Bio Pharma Pty Ltd. Who would like to start off?

Dr Ferguson—Bio Pharma Pty Ltd was incorporated in July 2000, so we are a relatively recent company. We were simply an R&D company at that point. We have successfully applied for an R&D Start grant, which was granted in December 2000. That grant was acted upon shortly thereafter and concluded in April 2002. That R&D spawned one broad patent which will become several patents in the relatively near future. We developed some novel technology which we are currently attempting to take to the market. So we are in the commercialisation phase at this point and we are involved in significant discussions with investors who will take us through to commercialisation.

Just sticking with your points, we have had cursory discussions with COMET and we intend to approach them again. In terms of the R&D tax concession and rebate, we have just got a rebate so we are rather chuffed about that. It arrived two days ago. Hence we are looking a bit more healthy than we were. I will elaborate on that point: we really felt for a significant period of time that we were not entitled to an R&D rebate because of some clawback provisions but that has since been clarified. That is a point that perhaps we will want to talk a little more about later.

We have no contact with CRCs at this point. In terms of statutory bodies, we are in fact on site with CSIRO Food Science Australia and that has been instrumental in our success in a lot of ways, largely through informal support. As a small company, finding some scientific engineering support close by has been beneficial and we would like to sing the praises of Food Science Australia.

CHAIR—Thank you. That was a good introduction. I am working down a list we have here so I am not selecting you in any particular order. Next is Mr Peter Atherton.

Mr Atherton—I will split my comments up between the two areas you mentioned: R&D experience and key messages or concerns. Our R&D experience includes commercialisation of steam sterilisation of waste in Australia in 1995—we got an AusIndustry concessional loan for that and assistance from an American company; automating and computerising waste treatment systems in 1998, which was with an AusIndustry R&D Start grant; and then recently we have

been commercialising organic waste treatment by biofermentation. That started in 2001. We are doing it in conjunction with UQ. Assistance with funding for AWS Clinical Waste has been from Queensland state development, and for UQ it has been through the CRC for Sustainable Tourism.

Getting back to the AusIndustry concessional loan, that was \$250,000 and was repaid in full and on time. The R&D Start grant was \$300,000 and that project was a big success too. AWS appreciate the assistance provided by AusIndustry and we think that more funding would help create exports and jobs and raise skill levels, and all that sort of thing. I am sure many more companies out there would appreciate assistance.

Getting on to the key messages or concerns, I have a couple of questions I would like to ask. Is there a strategic plan or a strategic business plan for Australia? If so, how do we access it and does it contain a strategy for research and development? If there is a strategy for research and development, does it address joint ventures in R&D with other countries, particularly near neighbours like Malaysia and Thailand, and of course the US? AWS have had expressions of interest from government level in all these countries, and also from some European countries.

The other concern is why it is so difficult for small business to raise unsecured R&D funding. Even when you have R&D Start or something like that, it is still very hard to get unsecured R&D funding. These are the last questions I have. Why don't banks support the growth of small business? Does the government have a policy of trying to help support the growth of small business through funding? That could perhaps be done through a development of the concessional loans scheme or something like that. That is all I have to say.

CHAIR—Thank you, Peter. We might come back to those questions as part of the discussion as I have made a note of some of those things. I am not sure that the committee will answer any questions on behalf of the banks, but we will see how we go with the discussion of some of the other issues. We now have Dr Reg Lehmann from Mediherb.

Dr Lehmann—Mediherb is Australia's largest purchaser and manufacturer of herbal medicine products for the professional market. We have about 90 employees, located in every state of Australia as well as in the US. Our manufacturing base is in Warwick, which is about 170 kilometres south-west of Brisbane. We also have a strong export focus and sell products in New Zealand, Scandinavia, Europe, South-East Asia, the West Indies and the US. R&D has been one of our key elements of success over the past 17 years and it has been driven by the research background of our founder, who has committed more than five per cent of our gross turnover to R&D in every year since Mediherb's founding.

Our three areas of focus at the moment are the formulation of efficacious herbal solutions to meet patient needs, validating the efficacy of formulas by clinical trials and in-vitro research, and research into the phytochemistry of medicinal plants. We have had quite a history of R&D funding and assistance over the years, and that includes RIRDC grants in collaboration with the University of Newcastle and the University of Tasmania. We have also done a lot of in-house validation of our own manufacturing sequences and processes because there is not a standard way of doing anything: everything has to be learnt and developed from first principles. We have done quite a lot of phytochemical research because a lot of our starting materials are very poorly defined chemically and no analytical methods exist for their analysis. We were successful in 2001 in obtaining an ARC linkage grant to investigate the active constituents of a range of

anthelmintic herbs in collaboration with the University of Queensland and also the Department of Primary Industries. Another ARC grant in 2002 was rejected, despite receiving quite good reviews.

We have been involved in quite a deal of clinical research—about 12 clinical trials and a range of diverse applications, such as immune function, hepatitis C, genital warts, venous leg ulcers, pain relief, childbirth, sleep enhancement and cognitive enhancement. We have had difficulty in getting funding for any of this research. It seems that the NHMRC do not wish to look at us because we are not really in the mainstream medical area, therefore we are in this little gap that does not really fit anywhere. We have been rejected for a Start grant application in this area but have recently received a BIF grant to investigate the bioavailability of an echinacea preparation. As for CRCs, we and the major manufacturers in Australia, as well as four or five different universities, tried to put together a CRC to investigate herbal medicine about two years ago. After about 18 months of hard work trying to put this together, the proposal was rejected.

This is a summary of where we are. We have been relatively successful in gaining a range of different grants but we seem to be picking around the edges and not really getting any funding for what we really want to do. We are getting bits and pieces of grants where we seem to find a place where we could get them. One of the issues that we have come across in the last 12 months has been that of indemnity insurance for clinical trials. Anyone who has been involved in clinical trials would be aware that the insurance issues have blown out. They have really hurt us quite badly in that area. The other thing that has been difficult for us, being a relatively small company, is the amount of paperwork and effort required to put together an application for a grant. For something like the Start grant application which we prepared, four people for something like six months spent a considerable amount of their time trying to put together that application. We found we could not actually do that ourselves and therefore we needed to hire a consultant to help us put the application together. That ended up being rejected anyway.

It really puts a very large strain upon small business—actually doing the applications, keeping track of the financial records that are required to maintain that funding, as well as just maintaining the information required for the tax concession work that we do. As you are well aware, everyone sees R&D in a company almost as something that, when the company is under stress, can be cut. Therefore, anything that you can do to show the importance of R&D to the directors of a company really is important.

We have also been hampered by the fact that we are an established business. We are not a start-up business but one that has been going for 15 years. We have had a range of small funding over the years but we do not have a research track record. If you asked for my list of publications, I would have to go back to my PhD research. I have been out in the industry now for 15 years and I do not have any publications for the last 15 years. Similarly, most other people who are working in real industry would not have publication records, so you look very scant when you put in an application. That is all I have to say. I raised a few comments during the presentation. I have also done a written presentation, which I think the members of the committee have received, in which I have expanded on that a bit more.

CHAIR—Thank you. The committee received that presentation and authorised it for publication at our meeting in Adelaide this morning. We have two people from the Heilbronn Group, Mr Graham Heilbronn and Mr Shane Murphy. Who is going to speak?

Mr Heilbronn—In view of the time limit, I would suggest Shane speak to our submission. He put it together and should speak to it. I will just pick up on a couple of comments from around the table. I happen to chair a venture capital fund totally away from this forum, and the major problem we had getting that off the ground was once again insurance—professional indemnity insurance for directors. One reason for setting up the venture capital fund was small business not being able to get access to funding and R&D. Most of them want R&D as well. The other reason was banks not looking after SMEs. That is not what I am here to talk about, but I just wanted to pick up on those two things. I will pass over to Shane. He put our submission together, and I would rather he spoke to it.

CHAIR—You said venture capital is separate, but it is not really. It is an aspect that this inquiry certainly covers. When we took evidence in Sydney, we had the Venture Capital Association come in and give evidence. So any other comments throughout the discussion related to that, with that hat on, will be very useful as well. Thank you.

Mr Murphy—Graham and I both represent the Heilbronn Group. The Heilbronn Group is a business that is 27 years old. Graham is the chairman of the board, and I am the director of business development. The difference that I see around the table is that our company is not in the business of creating a product that you can see but in the business of creating a mixture of products that are intellectual property. We are resource strategists, so our role in the community is to grab resources, whether they are land, water or whatever, and create a solution for them. Primarily, it is getting a building, subdivision, gas pipe or power station approval, or something like that. So we are involved with the land based type approvals.

We have a mixture of skills in the organisation: town planning, environment, project management, feasibility, master planning, surveying obviously, information management, tenure and property auditing. It is a whole mixture of different skill sets that come together. I sat down to our submission with a bit of a challenge, because our organisation is not typical of our industry. So what is the relevance of our being here today? The difference between our organisation and others is that, when you are small, you tend to be fighting all the time against nasty clients who want to just take your time.

We have made a strategic decision to fully fund my position in the organisation for R&D effectively. That is my role. It is not a marketing role; it is an R&D position to create that intellectual property in our business and grow it, and create new products and services to service not only ourselves but also a different sort of industry that we see emerging in Queensland, for greater prosperity—obviously for ourselves primarily, but there is some intellectual property we can share. So we endeavour to create new products and services, and that is most unusual in an organisation like ours.

The issues we see have been articulated here in general terms. The issues are the same. I will give you an example of a situation I come across quite recently. Strategically, 12 months ago we decided to research emerging industry in Australia—where is Australia going? This was referred to as the ‘business plan of Australia’ before. It is the same creature. I could not find one government instrumentality in Australia who could tell me what they were doing. In fact, the federal government told me that they do not do anything to do with emerging industries. I have an email back in the office that says: ‘Don’t annoy us. This is not part of our life.’ So I wondered who is doing it, who is looking after the future direction of Australia—not emerging

technology, because we have biotechnology and all these sorts of bits and pieces, but the whole future of where Australia is going. And there was not anybody. I found that highly frustrating.

A very technical and salient point, and perhaps only relevant to Brisbane, is that we spend an awful amount of time providing infrastructure and black roads between places, yet Queensland, particularly Brisbane, is so poorly serviced by a communications spine that it would frighten you, from a small business perspective. If I want to connect a link between here and the Gold Coast it will cost me an enormous amount of money, which is prohibitive in a small business environment. You would think that the federal government or somebody would say, 'This is a vital piece of infrastructure that Australia should supply for small business,' and it should just be there, like the roads. But it is not there.

What I am really trying to say in terms of access to intellectual property is that we need some. There are obviously some pools of thought going on in Australia, some pools of thinking in terms of where Australia is going, where Australia's industry is going, particularly—from our perspective—in terms of the land based sciences. But we just cannot find any. We cannot find a bureaucracy that is committed to the growth of professional services, if I can call it that. We find that pretty frustrating and we find that we are going our own way to a certain extent. Taxation is important and all those other sorts of bits and pieces are important, but the main impediment we see to the growth of our type of small business is access to intellectual property. There are obviously some intelligent people in Australia and some pools of thought and some CRCs going on; they just do not seem to be freely available to the sort of working environment we need.

CHAIR—Thank you. I now call Bob Beatty from Bosmin.

Mr Beatty—Thank you. I am a senior mining engineer who operated up to general manager level in the coal industry, as well as the registered inventor of seven patents. Our company operates under the Bosmin trademark and currently has two major research projects, which include the overburden slusher described in the brochure I have provided. This is a more energy efficient way of removing overburden in an open-cut coalmine. It has been extensively researched under the auspices of the previous NERDDP funding system in 1989. Our second product is the coaxial pipe conveyor. This is a flexible conveying system which negotiates tight corners and steep inclines and can be extended indefinitely. It has particular application in underground mines, where it can replace trucks. We have a client willing to use this equipment, as per the attached news update from Charters Towers. To proceed, we now need seed capital. The public funding opportunities we investigated included COMET and Start grants. For the COMET grant, the application form eligibility check list on page 3 requires that the business be less than five years old. Our business is much more than five years old. The COMET business adviser requires a legal contract, which costs up-front money. There is also a non-refundable application fee of \$250. The Start grant application form, in part D of the guidelines, states that in-kind contributions are not eligible. Part D further states:

Expenditure incurred on the project is eligible either from the date the project begins, or the date of lodgement of the final application, whichever is the later.

The prior expenditures should be included, since they form a useful measure of the R&D input. Part 5, 'Market returns', requires sales predictions over seven financial years. Part 8 requires detailed project costs over four financial years. Ours is a research project; detailed sales and costs predictions are premature. Our meeting with Consumer Services Manager, Bruce Dawson,

in March last year revealed that Queensland Start grants had reached \$32 million by November, against a budget allocation of \$30 million for the whole of the 2001-02 year.

In summary, for public R&D funding to be applicable to our work, we need access to seed capital. Secondly, we need the approval life of each grant to be broken down into smaller periods of time. Thirdly, we need government R&D funding to be bipartisan, with a predictable availability of budgeted funding. Fourthly, we would like to see more connect between patents and access to R&D funding. Fifthly, we would like to see the Australian patents system altered to (a) remove all petty patent provisions, (b) strengthen dispute resolution provisions within the act, (c) reduce the Australian patent annuity charges and (d) extend the right to apply for patents extensions to all patents. I submit a copy of these notes for the record. I also submitted a document to this inquiry on 18 October, in response to a query from Dr Washer. This document may have had a transmission problem with some of the attachments. I submit a full copy of that document now.

Mr Gibson—I am the Executive Chairman of Electrometals Technologies Ltd, which is a public company listed on the Australian Stock Exchange. It is a relatively small listed company. Its business is entirely taken up with the manufacture of a metal extraction product based on our patented EMEW—ElectroMetals ElectroWinning—cell, a registered trademark of our business. This equipment recovers pure saleable metal from various types of solutions which bear dissolved metals. These solutions may be found naturally or in industrial or mineral processing settings. Our system is a major leap forward in metal recovery techniques. It is simpler, cheaper to build, cheaper to operate and much more versatile. It is now regarded as leading edge and state-of-the-art technology in the world mineral processing industries. The technology originated here in south-east Queensland and has been commercialised here, and the products are all manufactured here in a suburb behind the Gold Coast. In the calendar year just ended, the product achieved sales of \$6½ million, over 90 per cent of which were achieved in markets outside Australia, primarily in North America and South America. We now have growing sales volume in Europe. We have had some sales in Australasia, but this market is relatively small compared to the potential elsewhere.

The business has operated in this mode for about 10 years. In that time, we have spent about \$7½ million in pure R&D cost, including the cost of achieving a suite of patents—some of which are now registered and some are pending—and the intellectual property that surround them. We have also experienced early commercialisation operating losses of about \$5 million. So about \$12½ million has been invested. Of the \$12½ million, the government has, in various ways, provided about \$850,000. The rest of the money has been raised through the public markets, through the stock market primarily, through private placements and several rights issues to shareholders. The government funding that has been received included a grant under a predecessor of the current Start program. It was obtained about seven or eight years ago, before I became associated with the business. It was for \$750,000 and it was used in developing certain applications of the original idea which are actually no longer relevant to the business but no doubt contributed in some indirect way to the product we now have. The balance of the money which I attribute to public funding represents export market development grants which have been obtained for some of our overseas marketing. From time to time, we have considered seeking Start grants, COMET funding or concessional loans but, for a variety of reasons, have found them not to be appropriate or even available. In a nutshell, this now quite substantial and fast growing business has been funded almost entirely by the private equity market.

The most difficult part of developing a business of this sort has been the lack of meaningful support in the commercialisation phase. We found it easier to raise money—particularly government or concessional sorts of money—when we were a pure R&D company than to find sources of capital for the extremely onerous task of taking a smart product and convincing the market to buy it. As I say, we have lost quite a bit of money in taking our sales from very sub break-even levels to what they are now, which is slightly profitable.

I recommend that greater consideration be given to meaningful support in the commercialisation phase, particularly loan funding. In a business like ours we see no reason why the government should subsidise the business, but we would certainly very much like to get someone to help us by lending us money which could be secured on our business assets and be repaid out of the success that we would expect from the funding. In other words, we do not need grants but loans would be great. I echo the comment made by several people here that getting loans from Australia's commercial banks for a company like this is extremely difficult if not, frankly, impossible.

We have found the Start grant process to be very onerous. More importantly, the contractual provisions and the administration of these grant is extremely onerous and represents a last, rather than a first, priority in terms of available funding for a company like ours. The complexity of the process and the need to hire consultants seem to us to very often make the whole thing rather unattractive—or at least unattractive to us; it might be quite attractive to the consultants.

We have seen the tendency in many of these agreements to try and tie up the technology within Australia to be an impediment, because our business is very much a global one. We have been assisted in the development of our business to a considerable extent by companies overseas, parties overseas—customers, particularly—who are prepared to, in effect, invest with us in developing a product for their application. Sometimes it has been put to us that we should manufacture some components of our product overseas—something we do not do now. It may be in the best long-term interests of the business for us to do that. That would not in any way denigrate the ultimate Australian ownership of the technology but simply allow the business to prosper. I will restrict my comments to those at the moment, in the interests of time.

Mr Valk—I am the CEO and founder of HCV Wireless. We are a start-up company focused on developing wireless products, specifically Bluetooth, which we market as a rapid prototyping tool called BlueMod. We also sell it as a product. The basic concept of the product is to reduce the barriers of entry for SMEs to incorporate wireless technology into new and existing products. BlueMod typically extends the life cycle of a product for an SME and reduces the need for that SME to do additional R&D where they do not have the capabilities in the wireless area, and that is typically most SMEs in Australia and many overseas as well.

My input today is pretty much focused specifically on start-up companies doing R&D. HCV Wireless has successfully raised a million dollars in seed stage capital and has developed a product that is now being exported to over five countries. The seed stage capital came from the state government, through an ISUS grant, and from the federal government, through a COMET grant, the BITS scheme, an export market development grant and R&D tax concessions, and we have also generated revenue from sales. In general, I think the environment for a start-up company is good and I think the government has done all the right things. While the efficiency

and effectiveness may not necessarily be perfect, I think it has done all the right things to facilitate start-up companies.

Unfortunately, though, the government initiatives are not working at the early expansion stage, particularly in the ICT sector. We have found it virtually impossible to raise the next stage of funding after the seed stage, which limits our commercialisation, particularly internationally. Venture capitalists, by their own admission, are just not investing in early stage companies at the moment, and they have not done so for over 12 months. VCs are administering the innovation investment funds, the IIFs; that is government money given to VCs to invest in early stage companies. IIFs are not investing that money in early stage companies either. They are typically going for later stage expansion stage companies.

Statistically, eight out of nine IIFs still have money to invest, two are specifically focused on IT&T or ICT and four are generally focused and include ICT. HCV has presented to all of these and has found that they are not willing to invest in early stage companies, even though the IIF investment guidelines say that they should. It is not as though we do not have a product or a market. We have proven the product, we have proven the market and we are exporting to five countries.

We are not the only company in this position. The lack of early stage funding has become a serious problem facing every start-up company, particularly all the companies that have come through the BITS program. Once they have spent the BITS money, they find it very difficult to get the follow-on funding to go commercial. Statistics show that BITS funded companies represent the top three per cent of new or emerging entrepreneurs today. So you have the top of the company getting start-up money but not being able to take it any further, and a lot of these companies are going under. Out of the nine BITS incubators, there are approximately six companies at that stage. So we are looking at over 50 companies that are now unfunded and are at serious risk of going under. That is pretty much the main point I want to make.

CHAIR—I would like to clarify a couple of things before we move on. Mr Beatty, one of the things you said could be done would be to remove petty patents. Can you clarify what that means?

Mr Beatty—Yes. There is a provision in the Patents Act now that allows people to take out a petty patent. I have never taken one out, so I am just talking from advice given by patent attorney people. Taking out a petty patent basically results in less money being laid on the table at IP Australia. Unfortunately, it also lulls people into a false sense of security that they have intellectual property coverage on their thoughts, because when you lodge your patent you have to have the documentation in place. Whether you go for a full patent or a petty patent, what you put in that original description is what you will be glued to when you come to take out a full patent.

Unfortunately, the provisions of a petty patent tend to appeal to less experienced or younger people, who might find that they do not have proper patent coverage when the time comes to try to get something back from the subsequent work they would have done, which will of course have been quite expensive. The other thing is that they are not recognised internationally, and patents are basically an international instrument. We should get petty patents out of the road because they just create a smokescreen that does not help anybody. That is my opinion on them.

CHAIR—A number of people have talked about some of the difficulties with applications, and I think most of the comments were in relation to the Start or COMET grants. Is there anybody here who can comment on the difficulty and difference between going through the process for a Start grant, as opposed to the straight tax concessions?

Mr Gibson—As I did not mention it in my previous comments, I would like to say that the R&D tax concession in its most recent form, which provides for the refund of moneys to correspond to the tax benefit connected to the R&D, is an excellent scheme. It is far easier for us to comply with that. The public can be sure that it is only genuine R&D that is being subsidised. It is not accompanied by all of the very onerous administrative provisions that go along with the application for, and subsequent acquittal of, grant type programs. On the other hand, the previous long-running R&D tax concession, which did not give a refund but simply gave you an enhanced tax loss, was of little or no benefit to most companies of the types being discussed here today, because those companies did not have taxable income and therefore could not achieve any cash flow benefit from the tax deduction. As I say, the scheme now which allows for cash flow benefits to be passed on as refunds is excellent and should be supported.

CHAIR—Does anyone else have a comparison of the various concessions?

Dr Lehmann—In relation to the general R&D tax concession work that we do, as we have a range of different areas within the company, we end up with having one person probably spending half of their time during the year just keeping track of something in the order of 30 or 40 different projects. Having about seven or eight people doing R&D and half a person basically keeping track of financial records places a strain upon what we are doing. The records then have to go off to a consultant because the work that we are doing is very applied research. Unlike most of the other people around the table who are doing pure research work, ours is developing our products and improving our way of doing things. It is continuous improvement work. We really have to be careful about which bits we claim and which bits we do not claim, because we do not want to end up in the situation of being ordered to pay stuff back. We have always involved a consultant in any of that work we do.

With regard to applications for Start grants et cetera, I have gone through that process twice in the last three years, and both times were unsuccessful. After you spend so long on an application and you get favourable reports from the people you are dealing with in your local office—and we deal very closely with the people in the local office here in Brisbane—it then gets sent off to Canberra and gets killed. You have basically wasted a great deal of time and effort for no return, and you get very little feedback as to why.

CHAIR—Is that the R&D Start program?

Dr Lehmann—Yes.

Ms CORCORAN—We have had a few comments earlier today about people being unhappy with the difference between incremental R&D and, for want of a better word, fresh R&D. You have described yourself as doing continuous R&D. Do you get tangled up in that issue at all?

Dr Lehmann—That is where we really rely upon our consultant to tell us what is allowed and what is not allowed. To me, it is a very fine line between what is and what is not allowed. To be honest, I cannot differentiate between what is and what is not allowed. Therefore, I go to

my consultant with my pile of paperwork, and we go through it project by project and work out what is and what is not claimable. This year the one thing that did place a lot of stress upon us in the R&D concession work was having to put a forward plan together. Previously it was retrospective. At the end of the year you would sit down and do your plan for the last year, whereas now, with the forward plan that is required, it took about a month or so of work to put it together.

When you are doing incremental work, you do not have an attitude of 'This is my project; this is the product I am working on,' with a laid-out plan. With incremental research, the priorities keep changing. Something you had not even thought of at the beginning of the period ends up being something that you spend most of your time on. I see the need for having a plan in place, but that did place a lot of stress on our system. In a company of our size—I would say we have 90 people—about 70 people are involved on the manufacturing floor. It is a batch manufacturing process. They are basically unskilled labour. You cannot involve them in putting together records and reports et cetera. Therefore, it falls to a very small group of five or six people to do all the work that is required to put those reports together. It really does place a lot of stress on the system.

Mr TICEHURST—Both Peter and Shane mentioned the lack of a strategic plan for the country. I am not sure how you could actually do that. I have been involved in strategic plans for business. Bob, I think you mentioned that the requirements state that you should have seven years of planning. The multinational company that I ran in Australia was one of about 50-odd. We did business planning for three years. A business plan for three years went for about 10 pages. The annual budget went to about 20 pages; it was much more detailed. My local area, the Central Coast of New South Wales, has a regional plan called 'Central Coast Moving Forward'. That is contributed to by two councils, a state government and the federal government, through the local Area Consultative Committee. In reality, the government now is about free enterprise and individuals doing things for themselves. Probably what the government can do best in strategic planning is to keep interest rates low, keep growth going and keep off business's back. What were you expecting the government to do in the sense of an overall strategic plan? Peter, you mentioned it too.

Mr Atherton—I think the country as a whole has to look at what it is doing and where it wants to be. It has to look at the big picture of how it fits into the rest of the world. Australia gets ridiculous situations like flooding up north and drought down south, so the issue of water has had a lot of publicity lately. I know that countries like Malaysia, which I have recently been to, have a plan to take the country forward. When you go there, it looks pretty vibrant and seems to be working, even though that is just a superficial look at it. With everything that happens in Australia, if there was a big picture plan for the country, the decisions and actions of our leaders, and what happens, would be able to be put in context. The country can look a bit rudderless. What is happening with big infrastructure programs? What is happening with, say, the north-west of Australia, which is four hours from Asia instead of eight hours like the rest of Australia? A bigger picture of what we want for the future of the country is what I am thinking about. It is a bit beyond the immediate needs of all of us around the table, but it is good to know where the country is going.

Mr TICEHURST—I am a relatively new member of parliament; I came in in the last group. When you look at all of the ministries, each of those ministries has a standing committee—in some cases several committees—and that is the sort of opportunity we are participating in here.

If you looked at any one of those ministries, there would be policy guidelines and frameworks. It would be a pretty difficult job, I would imagine, to put it all together. I would be interested to see Malaysia's strategic plan. Even the regional plan that the Central Coast locals have produced tends to be a plan for a plan. It does not define a lot, because there are so many components. The federal government would be the biggest business in the country, and to try to bring that together would be extremely difficult.

CHAIR—Some might say it is called a policy speech before an election. Part of our problem is that we have the potential to change the board of directors every three years—that is our democracy—and three levels of government as well.

Mr Atherton—It would help with infrastructure projects and things like that, for starters.

Mr TICEHURST—For instance, the transport department has put out a transport plan called AusLink, which is primarily focused on the long scale—rail as a primary mover for freight, and road plans feeding into that. It is a huge undertaking.

Mr Atherton—Also, Shane Murphy was talking about the communications link between the Gold Coast and Brisbane. We have a couple of areas of outrageous cost, one of which definitely is communications. When you travel overseas a lot, you are lucky enough to have a mobile phone that can work wherever you go, but the bill for it is horrendous. It should not be like that; you have to keep in touch. Communications costs are very high. The other area is insurance—professional indemnity, product liability and that sort of thing. We are in the hands of just a few insurance companies now and they have got to the position where they can choose whether they insure you at all, and then if they do insure you, it is by a factor of 10 over what is realistic in your budget.

CHAIR—That is a global problem; it is not a problem just for Australia.

Mr Atherton—If we had this business plan for the whole country and we had it worked out, we could say, 'That is a big problem for all businesses in our country, so what are we going to do to get it right for everyone?'

Mr TICEHURST—It is very difficult, as the chair mentioned before, until you have the states and local government. Another project we started to look at was some national thinking for the prevention of bushfires. Of course, as soon as you start talking about that, you are back in the realm of the states. Then we have local government saying that they cannot do hazard reduction because there are three or four state entities that jump on the trail. It is a good question.

CHAIR—It is a huge complication. Insurance indemnity, for instance, constitutionally is a state matter. When the states created the Commonwealth, they kept common law. If you go out and hurt yourself and want to sue somebody, you sue under common law, which is a state jurisdiction. We could pass all the laws under the sun but they would not be worth anything. That is another debate we can have. It is amazing how at a federal level in committees you end up coming back to the difficulty of the three levels of government and constitutional power. A lot of people think that the federal government has some sort of priority but, because of our constitution, it is often the reverse. Anyway, that is getting further from the point.

Mr Atherton—I cannot be too critical of that, because Henry Parkes was my great-great-grandfather.

CHAIR—So you are at fault!

Mr Gibson—I offer a cautionary view in response to the one about the strategic plan for the nation. A strategic plan that attempts to identify particular industries or businesses that Australia should pursue runs the danger of government policy makers trying to pick winners, and that is extremely difficult for them to do. I believe that the marketplace will pick the industries that this country has a comparative advantage in and should pursue. But I agree that the government certainly needs to have some forward thinking about big infrastructure investments, which private industry is not going to make. We could, of course, probably do a better job of planning for communications infrastructure, roads, rail and that sort of thing. But let us not get too carried away and try and plan everybody's business for them, because that would be a way of losing a great deal of public money.

Dr Ferguson—To take one step back from the strategic plan—before you even attempt to develop a strategic plan—I would have thought that there needs to be some sort of assessment of our current competitive advantages. I hear Roger saying that the market will step in, but—if you look at Australia as a company—there needs to be some overarching understanding of what our competitive advantages are and what our strategic needs are. Once you have those in place, there are at least a couple of things that you can do to build on your strengths. I am not suggesting for a moment that we spurn new initiatives but suggesting that we build on our strengths and plug the gaps where the needs are. These are simple things—though perhaps they are not so simple. Looking at that from a political sense, there are certain facts which everyone will look at differently, and different constituencies will view things in different ways, but at least you can have some facts on table—these are all areas where we perform currently, and we can focus on them and improve them, and these are areas where we perform badly and perhaps need to focus on—and go forward in that way.

Mr Murphy—Just to put it into our context, we come from a very technical and limited group of professions that are largely going to become obsolete. It is a little different from some of the biotechnology areas and some of the things that are new and evolving. We are asking, 'Where are we going to be in 20 years?' From our limited sphere—a small enterprise that is beavering away doing its own little thing—we wanted to reach out and ask, 'Where is Australia going?' You hear the rhetoric on TV; there is the biotechnology, nanotechnology and all sorts of bits and pieces. Our interface would be with a higher echelon not so much to set the direction but to ask what directions we going in that we are perhaps not even conscious of. I still do not know what they might be; they might include aviation and so on. We want to know where the future directions for Australia are—not so much in a planning context—because in our normal sphere we do not get to see them. That is the context of what we are looking for. Everybody can say its nanotechnology or biotechnology, but what does it mean? What does it mean to Australia? What are the other industries that are really up there that are perhaps developing in the rest of the world that we do not see? We are looking for access to that sort of thinking so we can open up our thinking.

CHAIR—This probably does not help totally, but it partially does: the government recently set the general areas of priority from a research point of view. The purpose was not really to pick winners as such but to say, 'These are the areas where, if funds are going to flow, they

should be going into.’ Within the science community, that sort of indication of those priority areas seems to have been reasonably well received.

Mr Beatty—Following on from that thought, I think the one area where the federal government particularly can have a long-term planning view which is useful to the community is in the attitude towards research and development. One of the first things that we need to see is a bipartisan approach. You mentioned before that the three-year term is a hurdle. It is a much bigger hurdle for the people that are trying to do R&D and suddenly find that the tax concessions have been wiped. After doing a whole lot of lead-up work with some company to try and get some capital approval through their system, they suddenly find it is all brought to naught because of some short-term policy that has been made at a political level.

In terms of what we are talking about now, it seems to me that it would be very useful if there could be some broad guidelines, for example, on what percentage of GDP is healthy for our community to be spending on R&D and what part the federal government is going to play in that in terms of the tax concessions, the grants and whatever other funding allowances are going to be made for that. There needs to be a long-term recognition, first and foremost—a policy statement, if you like—that R&D is in fact a valuable way for us to go and that it does have a long-term future and will have a cost benefit. In terms of getting a long-term plan, I see that as being something that is tangible and something that is needed.

CHAIR—That is part of the role of this committee in many respects. Hopefully, this inquiry will be able to achieve a report which has support from both sides. I probably should have said at the beginning that the committees of the parliament, like this committee, are not made up just of government members; they are made up of government and opposition members. Those parliamentary committees get unanimous reports more often than not, except in some areas that become a bit political. It is unfortunate that that work does not get quite the recognition that it should out there in the public. The public think that parliament is that circus called question time, and that is it. But it really does some good work. I think what you are talking about is the sort of thing that this committee can deal with. Backing Australia’s Ability, which was effectively the major R&D policy statement from the government, had general support from the opposition. There may have been argument around the edges about some of the detail and some of the changes in the tax concessions, but in a general sense there was pretty strong support. Martyn may be in a better position to comment on that.

Mr MARTYN EVANS—If you look back at the history of this matter since it has been a public debate, over the last 25 or 30 years, there has been almost no disagreement between the two major political parties as to the value of R&D. There has been some dissent about individual schemes. The one that was politically contentious some years ago, for example, was syndication. But at that point no-one argued about the value of research and development to Australian industry and to the Australian economy. There might have been dissent about a particular scheme and how that particular scheme was administered but no-one dissented about the value of the underlying R&D, simply about whether that scheme did or did not deliver underlying R&D. That was the issue of dissent about, say, that particular scheme.

But both major political parties have only ever argued about how high they could lift the level of R&D with their particular schemes. I think that was the issue of dissent between the two parties—whether our scheme or their scheme would lift the level of R&D higher or whether that scheme would lift it higher. That has been the issue of argument, really—whether a particular

version would take the overall level higher. I do not think you will get the argument from either political party—and I have never heard it in my extensive state and federal political career—that R&D is not valuable. What the political parties have competed over is how to lift it higher, spread it further and get it deeper into the Australian industrial and commercial psyche, not whether or not it was of great value, because I think we all agree that it is.

Mr Atherton—I do not want to keep harping on it, but when a company goes forward with its business plan it usually has to restructure its management and get more sophisticated or broader management. I was thinking about what you were saying about the Commonwealth and the states and federation and the three-year term. That is the sort of thing that could be shown up in a proper strategic plan as having weaknesses that could be looked at.

CHAIR—The previous committee that I chaired recommended twice to extend the three-year term, but it has not happened.

Mr LINDSAY—I think Bob was arguing in his evidence that we should not change the government at all!

Dr WASHER—One of the things we did identify as a major problem, from Robin Batterham and Backing Australia's Ability—the Labor Party has also identified this—is the commercialisation of our science in Australia. The problem has also been identified here today. Our knowledge is great; the commercialisation is lousy. What you told me today about the lack of venture capital is still a major problem and I think we need to stay focused. We are well aware of this. The thing is: what we are going to do about it and where we are going to get this capital from? In other countries, like America, there is a culture of this and it is not a major problem. In Australia, the culture is not right for the private investor to get in and back these investments. The return on investment overall is very good, so we just seem not to be getting the message through.

We seem to have also let slip through the net, to some degree, small to medium enterprises, because so much money goes into CRCs. As you mentioned—it was mentioned only once by someone else—it was not very successful. We did not hear anything about our universities. We put so much money into cooperation research. SMEs do not seem to benefit from our CRCs to the level we would anticipate, or our universities, so we have to have a rethink there. We do not seem to be able to get the message through. If anyone disagrees with this—I am being provocative—please jump in and have a go.

As I was saying to Martyn earlier, I think we have to look more at sending the message through to local government areas which are working closely with people on the ground. We have to get the message through about what our plans are—which are changing, like yours, all the time; new ideas to try and make the country work—and do that in a bipartisan way. We have to get that message out, and local government is probably the best way of doing it. We have ignored local government too much. I am not trying to down the states in this, but I think local government could play a bigger part for us.

Thanks, Bob, for coming back. I asked that question that you responded to about the fact that a lot of the costs that the federal government impose on business and intellectual property are very high. If we are going to help build the science infrastructure—although roads and communications are an essential part of science let us talk at a higher level for a moment—the

best thing about the infrastructure we have in place is to take some of the costs off what we do. That way, you cannot be rorted.

One of the problems with the tax debate was that there was initially a lot of rorting, so it was claimed, and therefore the tax laws changed. If we have organisations charging an exorbitant fee for intellectual property, that is something we can reduce. That is a way we can help business not to get rorted. You can register an intellectual property right. I think we can ease the costs off. I am glad you showed me, because that was the whole idea of turning around to government and saying, 'Why have we got such costs? If we want to help business, let's reduce the costs.' That is a constructive way of doing business. I have thrown a few things out that I was getting a response back from the people about.

Dr Lehmann—Regarding your comment about the universities, I would like to say that universities have been very helpful to us and I think that is a very unfair comment. We have had a lot of research programs with the universities and we are approached constantly by universities. At the moment I have four or five different universities who want me to work with them. Obviously the pressure is coming onto the universities to make sure they involve industry in their research programs. The problem that has generated is that I get people approaching me with something I have no interest in doing and no reason to support. You even get the situation where universities say, 'We'll give you your money back. Give us a cash donation of \$10,000 per year and we'll buy something back from you that will cost the same amount of money.' Between \$5,000 and \$10,000 is the normal amount they are asking for per year. But again the universities have been pushed into this system. It almost makes a nonsense of collaboration.

The universities are not normally that interested in the research projects that I am interested in because they are much too applied. I am quite fortunate that at the moment I am dealing with a couple of projects which are very involved with the universities. The Biotechnology Innovation Fund grant which I have involves two different faculties of Queensland university—one is the pharmacy department and the other is the medicine faculty—and a group at the Southern Cross University in Lismore. That is something which fits very well with the universities because they have techniques that I cannot afford to get up and running purely for my research grant. I can use their facilities, equipment and expertise and it works very well in that circumstance. Some of the other systems do seem to be pushing the universities in the wrong way. They are very cash-strapped at the moment. I am renting laboratory space from the University of Queensland at the moment. Again, that has been very good for me to generate liaisons within the university. It has been very beneficial to us. So I jump to the defence of the universities a bit.

Dr WASHER—That is great. I am glad to hear you are doing okay.

Mr Heilbronn—To pick up on the dispensing of grants and the connect with the business community, I could not resist following on from the comments here. As President of Commerce Queensland, the Queensland Chamber of Commerce and Industry, I have to put in a plug for them too. These sorts of programs provide a very good venue. We are talking about local government, but you have the Australian Chamber of Commerce and Industry and each of the state chambers—and they are groups of businessmen. You could not get a much more direct connect than through that avenue. I think there are 120 chambers of commerce in Queensland alone that we could tap into and use in that way.

Ms CORCORAN—I have a question that is a bit different to what we have been talking about; it is more to do with what you were talking about before. Maybe this group is not quite the group I should be asking the question of, but we have heard from other groups that sometimes very small businesses do not know about R&D grants and all that sort of stuff. I am interested in asking the smaller groups that are here how you found out about them—how did you know grants were available? Or is that something we are all born knowing?

Mr Beatty—If I could have first go at answering that. I have been equally bemused trying to find out just what is current and how you go about it. Looking into grants is a very time consuming business on its own. I found that the best summary was in fact this *Yellow Pages Business Ideas Grant* book, because that document lists all the grants that are available, both federal and state. I found that an incredibly useful summary and I do not think you can find a similar, concise document anywhere on the government web sites.

Ms CORCORAN—How did you find that book?

Mr Beatty—I applied for one of these grants, and they gave me this book as a concession for not getting the grant!

Ms CORCORAN—I am not sure I like the logic in that!

CHAIR—There is one government site called GrantsLINK, which can take you into that information.

Mr Beatty—The other interesting thing about the Yellow Pages book is that it has a very brief summary of what each grant is about and what the restrictions on it are—and that is really what you need to know. The alternative is to pick up one of the application forms, but this is what you are faced with before you even get to square one.

CHAIR—Would anyone else like to comment on that?

Dr Lehmann—Basically consultants approached us and said, ‘We can probably help you get some research funding.’ There is such a minefield of different grants out there. There are state grants and, as you said, there are also local government grants available. There are grants from here and grants from there. But most of the time in a business you are only worried about keeping your head above water and, therefore, applying for research grants—having the time to go around and do all of that—is very time consuming. So we sat down with the consultant, outlined the research that we wanted to do and looked at our options. Initially we were not even aware of the tax concession work. That type of stuff is all out there, but it is matter of getting to it. We were of a size that we were approached; a lot of other companies would not be approached.

Mr Atherton—I first came across federal government grants when I was working for the family company in Melbourne on steam sterilisation. The company got a licence from the American Sterilizer Company in about 1942 or 1943 which went right through to about 1975 when, with the help of what was then the equivalent of an AusIndustry R&D Start grant—I have forgotten what it was called—we were able to redesign all our sterilisers so that we could finalise the arrangement of a design licence with the American Sterilizer Company. That made me aware of them for the future, when I had my own company.

Mr LINDSAY—Initially this question is directed to Alan Ferguson and Henry Valk because you two raised this, and it follows up what Dr Washer said. If you look at the path from getting an idea, researching the idea, developing the idea and commercialising the idea, and if we say that path represents 100 per cent, what percentage of the challenge is the problem of commercialisation?

Mr Beatty—It would be 99 per cent.

Mr LINDSAY—I will go on from there. Do all of you agree that it is very significant?

Mr Valk—Yes.

Dr Ferguson—Absolutely.

Mr LINDSAY—You also talked about early stage companies and the problem of getting dollars. I would like you to think about superannuation funds. You have all been very positive about saying, ‘If we could only get the money, there’s a great future for these things we have got to work.’ How could we get superannuation funds to invest at this sort of level? Should the government underwrite the risk? Should there be a process whereby the government has to decide whether your product is a goer? Do you think it is acceptable in Australia that the government should have a process to try to get superannuation funds to invest in Australian developments? What are your comments?

Mr Gyuran—First of all, I would like to say that I originally came to Australia from Canada, three years ago. We started this company with the idea of getting something of which Australia has plenty—that is, animal bile. Animal bile is a waste product, and there are incredible resources in Australia. Using all those resources you can develop a new industry such as pharmaceuticals, but you need incredible knowledge to do that kind of thing. So we started, and we are very grateful to the Australian government for giving us this grant. As Alan said before, we finished the R&D, and from there we had an incredibly big problem raising money. Since the R&D funding finished, almost a year had gone by and we were unable to get any venture capitalists interested and we were unable to get any money from the banks—everybody has complained about that. Probably the biggest problem for a small business is to commercialise, even if it has the greatest ideas. In the meantime, once we had developed the project, new information came out. For example, we can make liquid crystals from animal bile, which is probably the future for plasma television, computers and those sorts of things. We realised that was going on, and we are at the stage of starting up right now. But we can start up in only a very small way until we are able to raise enough money.

My suggestion would be that there should be a government strategy somehow underwriting anybody who is willing to invest in these small companies that are promising a lot. In Canada if somebody is investing in another business or a successful businessman, they get a tax concession on the investment. They can write-off at least 35 to 50 per cent of their investment. That would be my opinion on how to solve it.

Mr LINDSAY—But that costs the government real money. If the government just underwrites somebody else’s investment and the thing is successful, it does not cost the government anything at all, effectively, other than the odd one that will fail. But it gets you what you need. Do you agree with that?

Mr Gyuran—Yes, I absolutely agree with that. It would be a great thing if some kind of government guarantee were given to investors or venture capitalists or whomever they are.

Dr Ferguson—Just going back to your question, it is my experience that, if it costs you X dollars to do the R&D, it is going to cost you maybe between 3X and 5X to commercialise.

Mr LINDSAY—That is what I need to know.

Dr Ferguson—The R&D may be difficult and risky, but it is almost an issue of scale. You can do things in a laboratory for a reasonable sort of cost—and when I say reasonable, laboratories are very expensive things to run—but then, if you want to take that idea that you have gotten to a certain stage and you really want to go with it, you will want to go to a pilot plant and then you will want to go to a full-blown plant. That is where the real dollars get sucked up and that is where it is really hard.

To follow on from your point—and I did notice that you scribbled this down and I agree wholeheartedly—superannuation is going to be an enormous pot of money in this country. A significant proportion of that money currently goes overseas for investment purposes. That is fine, but I think we need to look at it very carefully if we are going to have bigger, better home-grown businesses and if we are going to create the culture that I heard about before and with which I agree wholeheartedly. We do not have the culture here where people have a go in business and do well. People make their money in this country by investing in bloody real estate, for God's sake. Nobody wants to stick a few bob into a little company and foster it and see it grow, but that is the culture, if any, that we need to propagate.

You are not in any way, shape or form going to find that superannuation funds say, 'Yes, pick us, we will stick all of our money in small to medium enterprises.' It is ludicrous—it will not happen, because it is ineffective from their perspective. They need to have a few big winners to pay the people who put money into them and to keep a decent curve. What we need to do, perhaps, is to say, 'Can we quarantine a small portion of your funds—it might be two, three or five per cent of the funds available—and focus that on developing smaller businesses in this country?' They will howl. They will not want to do it, because the administrative side of that for them is perhaps difficult. But there it is—a small percentage will be invested to build SMEs in this country and every time you build an SME you make jobs.

Mr TICEHURST—Just on the commercialisation, what you are saying is that the federal government should provide the 5X, I think it is—if your R&D fund is X, you are saying that it is five times that to commercialise it. But there are limited funds already for R&D. Why is it that the banks and the venture capitalists will not accept your risk? That is really what it is. You are saying it would be great if the government would accept the risk, but the government only has taxpayers' money. So why is it that the banks or the venture capitalists will not accept that commercialisation risk?

Dr Ferguson—There are more components to it than that—X and 5X are really just technical things and I am a technical kind of guy. It is 5X to commercialise the technology—nobody said anything about marketing or sales. So the actual figure to make it happen is probably closer to 10X.

CHAIR—Somebody who might answer the question—or try to answer it on behalf of all of the venture capitalists in Australia—is Graham Heilbronn.

Mr Heilbronn—If it were so easy to start an SME and be successful, everyone would be doing it. There is a high failure rate, but there is also a high profitability in those that are successful, particularly the very innovative small companies. I favour, and I think this is where you are coming from, Peter, quarantining—I think that word was used—a certain amount of super funds and saying, ‘You must invest in these sorts of companies.’ They can pick and choose those companies. Whether or not government has to guarantee those, I am not sure. If the spread were big enough, I think we would find that the failure rate on the spread, or the dollar value lost, would not be so great. There would be companies that would go down, for sure, but I think the very innovative ones would be very profitable and they would cover the loss. I do not know that it is such a big risk to do it.

But when you are starting a venture capital company and you are getting into it, you have not got the spread. In the one that I am chairing, we have to start with three investments, if you like. When you are going for three investments and that is the first lot and you have gone out and done your fundraising, you want to be pretty sure that they get up. To give you an idea, we are knocking back 19 out of 20 at the moment. The banks will not even look at it at all. It is far too difficult for the banks. They have not got the people sitting around that table. I like to think we have a very good little board; there are only three of us but we have all been through building businesses and so on and we can understand that sort of thing to a far greater extent than your average bank. The banks just will not touch them. I think the answer is something along the lines of where you are coming from—a percentage of our super funds. That dollar value is growing all the time, and I would like to think that the smarts in that area will more than compensate for the failures that come along. The failures will fail for sure but the smarts will have a percentage success rate that is far in excess of a lot of companies. By way of an example, there is a 40 per cent profit margin on the companies we are looking at—and they are coming in. There are plenty of them out there.

Mr Valk—Going back to the superannuation funds, I think it comes down to the risk profile. I am not sure what superannuation funds invest in at the moment, but I know that with my superannuation fund I get to tick a box as to what I want the fund to invest my money in. If there were another box there that said ‘High-risk SMEs’, maybe more people would tick that box!

Mr Beatty—I think that is a brilliant idea. The key to it, as I see it, is the government backed guarantee. The point that Graham has made is that the SMEs have a very high success rate—or a very high return for the ones that are successful, but a high failure rate. Of course, if the super funds have a guarantee, it is a no-brainer for them. They can just invest. The problem that the government have is with the accountability and with picking winners and how they do it. I think the way to do that is to have a connect between patents and the application. If somebody has gone to the point of getting a patent and putting it in, they have done all the basic thinking that needs to be done and the patent office has provided an independent review of whether the product is innovative and novel or not, and that gives the government security that they would not otherwise get.

The other advantage of what Peter is proposing is that the applicant gets a one-on-one situation with a super fund, so instead of having to fill in miles and miles of paper he can go and

talk to a guy in an office and put a brochure in front of him and say: 'This is what I want to do. This is the plan. These are the contacts. These are the blokes. These are the photographs.' If you can convince one guy that it is right and it is worth backing, you get a quick yes/no answer and that is what small businesses need. They do not need long lead times before they get a yes/no answer. They want encouragement right from the word go, and they need seed capital. They do not want money that they have to pay back. They have already put in as much money as they can themselves before they have gone looking for it. To offer a fifty-fifty grant or a 20-80 grant, you are really pushing it, because the guy has no money anyway. What he needs is seed funding. He needs to be able to go to an individual, convince them that he is worth backing with superannuation funds and with a guaranteed refund if it falls back, so the super fund is protected. I think it has a lot of merit if you can pull it together that way.

Dr Lehmann—I am in a different situation because I am not a start-up company. I am an established company, and we have had good success with superannuation funds. We approached one of those to take up ownership of shares within our company, and we were successful in that approach. So they are doing it. It is not something which is novel to them. But, again, it is the risk factor. We were an established business with a good growth rate and a track history—we are 15 years old. This happened about three or four years ago. It is obviously a risk management process for them. Once again, I have to defend someone else. The super funds are doing stuff but, again, it does come down to risk for them.

Dr Ferguson—To follow up on that, the funding depends on where you are and how much money you need, because there is a huge gap in between. There are supposed to be these mythical characters called 'angel investors' who are prepared to invest up to \$300,000, \$400,000 or \$500,000. I have yet to meet one. I have been to lots of meetings and have given lots of pitches, but I have yet to shake hands with one. There is a yawning gap between that \$500,000 and about \$2 million, \$3 million or \$4 million, because no-one is prepared to go into that spot. A lot of the bigger VCs will not touch you unless you want more than \$5 million. Some of them will come down to about \$2 million. If you are a small company with a fabulous idea and you need somewhere between, say, \$500,000 and \$1½ million you are whistling in the wind. There is nobody out there at present.

Mr Heilbronn—There is one.

Dr Ferguson—I am sorry; I stand corrected. Graham is the first one I have met. There has to be an organic growth for these companies: you start small, you do your R&D, you get to a certain stage and then you grow again and again. Those stages need to be identified and, if you like, something tangible done to assist each stage.

Mr Valk—What you are referring to is called a funding chasm. The government did do something about that some time ago with IIFs that particularly targeted follow-up funding up to \$4 million. For some reason, though, it is just impossible to get that money out of them.

Mr LINDSAY—You can fix it with wireless technology! Has anybody had their banks inquire about triple bottom line reporting? No? Has anybody thought about R&D assistance for services, rather than for things?

CHAIR—I think Shane and Graham are in that category. I was going to ask that question, because I know a little bit about their business from years gone by. They would fit very much

into that problem, where what they do is not necessarily a product that you can pick up and say, 'This is the R&D I have done on this' but much more service orientated. There is a problem of definition.

Mr Murphy—I will put that into context. If I have some ideas in my head which I could lump together to solve the salinity problem in the Murray-Darling Downs in Queensland, it is not a tangible thing. I cannot just say, 'This is something I can create and fund.' But I know—and this is one of the things we are struggling with at the moment—that a whole group of disparate thoughts or processes are going on that if put together in the right way could solve that problem tomorrow. You would have to take the politics out of it and so on—just those little bits and pieces. Some technologies are not being properly used now, from different points of perspective, which if lumped together in the right way could solve that problem commercially. That is one example of how you can do those bits and pieces. That is the intangible thing that we deal with, and it is very hard for anybody to fund that. There are some really substantial economic benefits to all of Australia from coming up with a solution like that.

CHAIR—The question is: if you proceeded to do that and funded it yourself, would you qualify, for instance, for R&D tax concessions, a Start grant or a COMET grant?

Mr Murphy—The answer is: I do not know. We have all seen bits of paper like that over the years, and it just frightens us.

Dr WASHER—I would like to comment on the salinity problem. The feds are about to put \$40 million in to WA alone, if the WA state government comes up with a matching \$40 million. We in WA probably have one of the biggest problems with salinity. That is \$80 million. The government boys are not going to get out there and start fixing the thing up; they are going to have to contract it out to private industry to fix this problem up. What I am saying is that there is a bundle of money coming out to treat salinity, for example. In order to fix up the problem, the government are going to have to get people with ideas and diagnose the problem of how it originates much better than we have done in the past. So there is a bundle of money coming up and the states are going to administer it.

Mr Murphy—We are not saying that there is no money to fix the problem; we are saying that there really is a better way of doing it. If somebody said, 'What is a really intellectual solution to this'—rather than just throwing money at the problem, which will be spread all over the place because of the politics—we could come up with a better answer. But it is not put into that working environment.

Mr Valk—I have a simple comment to make. We have had a number of companies approach us to do R&D for them. So we would do the R&D, and typically there is a lot of spin-off R&D that comes out of that, but essentially the person who pays for the R&D gets to claim everything. So while we are doing R&D we cannot claim. I think that is standard.

Mr Beatty—I would like to add to the comments Shane made earlier about desalination. We are currently looking at a project in the Lake Eyre basin. We are looking at how we can better utilise the water in that basin. It ties in with the mining equipment I was talking about—the overburden slusher, which has the ability to dig very deep canals very efficiently. Thinking in terms of the water which is lost down the Cooper Creek, for example, something like six cubic

metres of water per year is lost through evaporation and transpiration. That is fresh water which could otherwise be utilised. By digging canals we can collect that water and pool it.

Who is funding that? We are funding it. We are trying to put together a proposal that will be attractive to the various governments, including the federal government. We have written to John Howard. At this stage we are trying to knock enough of that engineering into shape to have a plausible story to put forward. We will then see if we can develop it into a project. I think the key is to get the nub of the problem and the benefits identified first and then go away and look for the engineering solutions.

CHAIR—I have a couple of other issues to raise which we have discussed in other fora. The tax concession is now 125 per cent, and 175 per cent for incremental R&D over and above a three-year running average, or something along those lines. Some suggestions have been made that there should be more steps in those tax concessions to provide a greater incentive. So the initial one might start at 110 per cent, rather than 125 per cent, but it might go right through to 200 per cent, based on the idea that the more research you do, or the more investment you make, the greater tax concession you get. Does anyone have any comments on that idea?

Dr Ferguson—We do need to encourage R&D; that is a given. Again, I think part of the problem is actually making use of that R&D. R&D is a very expensive business to be in—you need lots of infrastructure and it is very costly—but unless it creates something of use, what is the point? I do not want to get into an esoteric discussion about pure research and so on, but I do think we need to be a little more focused with that. There is support for R&D; let's commercialise it.

Mr Atherton—To put it in simpler terms, you need the horse before the cart; you need the funds first to be able to get to the stage of getting the tax concessions.

CHAIR—A similar criticism was made that you could end up providing a bigger and bigger tax concession for something that is not actually producing anything. There is a danger in that.

Dr Ferguson—It needs to be balanced.

Mr Heilbronn—The point being made here is that the cash flow is the problem. It is nice to get that tax concession after the event but we could do without it at all—I won't say that now!—if we got the thing up and running. Cash flow in getting there is the main problem we are talking about.

CHAIR—I have a question to do with culture. Reg Lehmann commented that if a company is under stress it is often easy for directors to cut the R&D. Reg, did you make that comment because often directors do not see the value in R&D? When I say 'value' I do not mean the long-term value to the company but the actual dollar value in the first instance.

Dr Lehmann—I am in a situation where I am in an established business and therefore R&D is basically something which is tacked onto the rest of the company. Our role is to secure the future of the company. When we had our assessment by those superannuation funds they looked at our R&D capacity as being the major thing. A determining factor in their actually investing in the company was our capacity for R&D, our track record of what we had done internally with R&D.

But what happens is that when it comes to the bottom line it is always 'We're going to have to cut you back now but, don't worry, we'll give that money back to you next year.' When it comes down to harsh financial reality it is the R&D group that has to make the first sacrifices. So it is not that they do not see it; it just comes down to harsh financial reality—that is what is easiest to cut. You still have to make product. Obviously, if you are in financial difficulties you have got to get out there and sell more. If you look at what your major overheads are then sales and marketing and R&D are two of your major areas of overheads as such. You can obviously cut manufacturing if you are producing less product, but it really comes down to there not being much left that you can cut besides R&D. You do not want to cut sales and marketing; you do not want to reduce that as your opportunity to make more product now. R&D might get you more sales in 12 months time or 18 months time, but sales and marketing should give you a response immediately. Therefore, R&D is asked to take the cut now for the betterment of the future.

CHAIR—One of the suggestions made to the committee was that if the tax concession that ultimately happens when a tax return is done was actually seen within the company as a grossed up value at the income level it would give the R&D people within that company greater arguing power to demonstrate to directors the actual dollar value of the R&D that has been done in that year, because it would be shown as income. It would effectively be an accounting change to allow the company to gross up what ultimately is a tax concession but show it as income. This was suggested as a way of helping to change the culture so that directors and so on would start to say, 'This has actually improved our income for the year,' which they would not normally have seen. It probably does not apply to the smaller companies here, because in the smaller companies the directors are the R&D people, are the marketing people, are the managing director people, are the tax people. But in a company of your size, even though it is not a huge company, you do get those sorts of break-ups. Do you have a comment on that, Reg?

Dr Lehmann—Because that is almost a policy area within the company, I really cannot comment too much on how it would be affected. Mediherb is very fortunate in that its founder does have a research background and has really pushed that all the way through. He has fought for us, and has had to fight for us, very hard at board level to maintain the levels of funding that have been given to us over the years. We could show that to the financials, particularly when you do have external investors, because they would need to be convinced of that as well. Again, I really cannot comment on how that would be viewed by the powers that be, because I am a research chemist, not an accountant.

Mr TICEHURST—One of the things that throws accountants when you are looking at R&D is a maxim that a British group MD used to use: 25 per cent of your business will come from products or services that you have introduced in the last five years. If you go back and look at that, you will see that it is a very effective tool. I do not know if you have used the 80/20 Pareto analysis. You can point that at just about anything at all. That one throws the accountants every time, because it is not that difficult to prove when you have a longer running company.

Mr Heilbronn—I am not sure that I fully understand what you are getting at there. It is one thing to be a director in a company and feel warm and fuzzy about it, but are you suggesting that that would in any way enhance the company's borrowing capacity?

CHAIR—It could do. Obviously, you would have to declare how that is shown, but it may in a psychological way help the borrowing power. That is a distinct possibility. You might have a \$200,000 tax concession for the year, but grossed up that is \$300,000 worth of income. The end

result is still the same for government and for the business. The suggestion was raised as a means of trying to help change the culture when you do have a problem in that area.

Mr Atherton—While we are on the subject of borrowing—I did ask this question earlier but I do not think we have had an answer—whatever happened to the concessional loans that AusIndustry was granting?

CHAIR—We normally ask the questions not answer them! I thought they still existed, but maybe that changed with Backing Australia's Ability. Peter, do you know?

Mr LINDSAY—I do not know.

CHAIR—We will get you an answer on that.

Dr WASHER—We might have to ask Invest Australia about that.

Mr Atherton—If you have a project that has assets with patents, such as Bob was talking about, or with a pilot plant, as you were talking about, Alan, getting a concessional loan to commercialise the patent or the pilot plant is a very handy tool. I have done it successfully once, and it really made a huge difference to my company. I know that we have another one now that is bigger and better, and it can tie in with the salinity projects, too. One of these concessional loans would really be like rain in New South Wales at the moment.

CHAIR—I thought there was still a mechanism for it, but I might be wrong.

Dr Ferguson—I believe they are back on again. There was a bit of hiatus with AusIndustry funding there for a while.

CHAIR—That was only with the Start grant.

Dr Ferguson—I was under the impression that the concessional loans were also wrapped into that. I believe they are back on. I hope so, because we will be after one shortly.

Mr Beatty—I am not sure whether in my previous submission I said that six cubic metres or six cubic kilometres of water were lost through transpiration in the Cooper Creek. It is six cubic kilometres per annum. In regard to big company experience: I have had quite a bit of that because the R&D issues that I have been involved in have been large equipment issues and, by virtue of that, I have had to seek cooperation from the large mining companies. I find that tax concessions are not a big factor in the consideration at all. The biggest factor seems to be the disruption that R&D causes to the normal production cycle—that is the difficulty they have. It is a company ethos thing more than anything else. The ethos in a big company is shape up or ship out; the ethos in a successful R&D company is that it is okay to be wrong. When you try to mix those two types of ethos together on the production field, you have got major problems.

The companies that have tried to do it have had R&D sectors that have become ivory towers. They have been regarded as outhouses and they have jealously guarded their R&D to the point where it gets to be a job security issue rather than an R&D issue. A lot of those companies have shut down their R&D offices altogether. They now have the option of doing it through the

CRCs—and what I find with the CRCs is that they are really a vehicle for big company research. That is where most of the money seems to be going. It is disappointing to see that the commercialisation return on a CRC investment is so poor. The reason for that is, once again, company ethos. They do not want R&D people messing around with their production cycles; they do not want you getting in there and trying a new piece of machinery or a new technique because it is going to upset the budget, which might be a five-year or three-year budget, and they just do not have room in it to have possible downsides.

The way to get around that, as I see it from a government point of view, is to introduce a public recognition aspect to it. One thing that big companies are vulnerable to is public recognition. If we could come up with a state based award system for a big company for assisting a small to medium enterprise to develop and commercialise an R&D product—and there could be, say, seven of them a year—that would have a far bigger impact than any other tax benefit or any other manipulation that I can think of.

CHAIR—There are similar awards in the environmental area and major companies working within a community.

Mr Beatty—It becomes part of the environmental bottom line, as they say.

CHAIR—We are going to have to draw to a close now. It has been very useful to the committee—I think I can speak on behalf of my colleagues. Thank you all very much for your input today. These sorts of discussions are really rounding off the inquiry very well so that, hopefully, we will come up with some good recommendations that government will accept and implement to improve this whole area. We will send you a copy of the transcript of this afternoon's discussion in case anything has been interpreted incorrectly so that you can amend it. Thank you again for your input into the inquiry.

Committee adjourned at 6.03 p.m.