



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

SENATE

FOREIGN AFFAIRS, DEFENCE AND TRADE REFERENCES
COMMITTEE

Reference: Defence Materiel inquiry

FRIDAY, 27 SEPTEMBER 2002

CANBERRA

BY AUTHORITY OF THE SENATE

INTERNET

The Proof and Official Hansard transcripts of Senate committee hearings, some House of Representatives committee hearings and some joint committee hearings are available on the Internet. Some House of Representatives committees and some joint committees make available only Official Hansard transcripts.

The Internet address is: **<http://www.aph.gov.au/hansard>**

To search the parliamentary database, go to: **<http://search.aph.gov.au>**

SENATE
FOREIGN AFFAIRS, DEFENCE AND TRADE REFERENCES COMMITTEE
Friday, 27 September 2002

Members: Senator Cook (*Chair*), Senator Sandy Macdonald (*Deputy Chair*), Senators Hogg, Johnston, Marshall and Ridgeway

Substitute members: Senator Bartlett for Senator Ridgeway

Participating members: Senators Abetz, Bartlett, Boswell, Brandis, Carr, Chapman, Coonan, Denman, Eggleston, Evans, Faulkner, Ferguson, Ferris, Forshaw, Harradine, Harris, Knowles, Lightfoot, Mackay, Mason, McGauran, Murphy, Nettle, Payne, Stott Despoja, Tchen, Tierney and Watson

Senators in attendance: Senators Bartlett, Cook, Evans, Hogg and Johnston

Terms of reference for the inquiry:

To inquire into and report on:

1. Whether the current materiel acquisition and management framework of the Department of Defence is effective in meeting the organisation's equipment requirements.
2. In considering this matter, the committee is to examine and report on the following issues:
 - (a) whether the current materiel acquisition and through-life support system is meeting, and will continue to meet, the needs of Defence and Defence industries in a timely, cost-effective and qualitative manner;
 - (b) the impact of the Defence Materiel Organisation acquisition reform program on materiel acquisition and management;
 - (c) the current status of major equipment projects in meeting the organisation's requirements;
 - (d) the impact of the creation of decentralised System Program Offices on materiel acquisition and management; and
 - (e) any other issues relevant to the effectiveness of the current acquisitions framework which arise in the course of the inquiry.

WITNESSES

AHERN, Mr Raymond Geoffrey, Senior Consultant, Defence Materiel Organisation Client Manager, Tanner James Management Consultants Pty Ltd	39
BORGU, Mr Aldo Antony, Program Manager, Operations and Capability, Australian Strategic Policy Institute Pty Ltd.....	57
BROWN, Mr Gary Maurice (Private capacity)	26
COCHRANE, Mr Warren, Group Executive Director, Australian National Audit Office	2
McNALLY, Dr Raymond Gordon, Senior Director and Audit Manager, Australian National Audit Office	2
MINCHIN, Mr Tony, Executive Director, Australian National Audit Office	2
THOMSON, Dr Mark John, Program Manager, Budget and Management, Australian Strategic Policy Institute Pty Ltd.....	57
WATSON, Mr Michael, Group Executive Director, Australian National Audit Office.....	2
WHITE, Mr Hugh John, Director, Australian Strategic Policy Institute Pty Ltd.....	57

Committee met at 10.03 a.m.

CHAIR—I declare open this meeting of the Senate Foreign Affairs, Defence and Trade References Committee. There are a few remarks I need to make at the beginning of these proceedings. Today the committee commences its public hearings into the Defence materiel acquisitions and management framework. The terms of reference set by the Senate are available from secretariat staff and copies have been placed near the entrance to the room. Copies of submissions from today's witnesses that have been published by the committee are also available.

Today's hearing is open to the public. It could change if the committee decides to take any evidence in private. The committee has authorised the broadcasting of the public aspects of proceedings. Witnesses are reminded that evidence given to the committee is protected by parliamentary privilege. It is important for witnesses to be aware that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. If at any stage a witness wishes to give part of their evidence in camera, they should make that request to me as chair, and the committee will consider the request accordingly. Should a witness expect to present evidence to the committee that reflects adversely on a person, the witness should give consideration to that evidence also being given in camera because the committee is obliged to draw to the attention of a person any evidence which, in the committee's view, reflects adversely on that person and to offer that person an opportunity to respond.

An officer of a department of the Commonwealth shall not be asked to give opinions on matters of policy. However, officers may be asked to explain government policy, to describe how it differs from alternative policies and to provide information on the process by which a particular policy was arrived at. When witnesses are first called upon to answer a question, they should state clearly their names and positions. Witnesses will be invited to make a brief opening statement to the committee before the committee embarks on questions. That concludes my opening remarks.

[10.06 a.m.]

COCHRANE, Mr Warren, Group Executive Director, Australian National Audit Office

McNALLY, Dr Raymond Gordon, Senior Director and Audit Manager, Australian National Audit Office

MINCHIN, Mr Tony, Executive Director, Australian National Audit Office

WATSON, Mr Michael, Group Executive Director, Australian National Audit Office

CHAIR—Welcome. Mr Cochrane, let me recognise you and invite you to make an opening statement on behalf of the Audit Office.

Mr Cochrane—I will start at the beginning and say that the Audit Office's activities in relation to Defence are mainly directed through our financial statement auditing activity and our performance auditing activity. The submission that we have given to the committee documents fairly well the performance audit activity over recent years in the DMO area. To paint the picture a bit broader than that, though, our financial work also has a pretty important focus on the activities of the equipment organisation, particularly as it has such a major significance on the Defence financial statements.

This morning I have Mr Watson on my left, from the financial area. The two gentlemen on my right, Tony Minchin and Dr Ray McNally, are basically responsible for carrying out the performance audit activity within Defence. You will see from our submission that we have documented the results of a number of performance audits over the last 10 years that basically indicate that the Audit Office has found the need to make a number of recommendations for improvement in the Defence acquisition activities repetitively for many years. With that broad background, we are quite happy to take any questions from the committee.

CHAIR—Thank you very much. Before I ask any of the committee to frame a question for you, let me open by saying that, on page 3 of your submission to us, with respect to your report *Management of major equipment acquisition projects—Defence*, you conclude:

... overall management of acquisition projects has experienced systemic problems arising from a traditional top—down management of Defence's various functional groups ('stovepipes') without effective lateral communication...

My question is about how this has been addressed. Even though the ANAO has not examined DMO's overall management framework, can you say that you are familiar enough with the acquisition reform program to assess whether these systemic problems have been addressed properly?

Mr Cochrane—We would very much prefer to say that we need to go back and have another look to determine whether they have been addressed, but it is also fair to say that, when we conducted that initial view of the major equipment acquisition projects and decided that we would defer it for 12 to 18 months, we did talk to the acquisition people, and there was a clear

intent and a clear plan there for a number of reforms in many areas. But certainly we have not done the work to be able to determine whether those reforms are yet working. We can say there is certainly an increased focus to improve things from both the top end of Defence and the defence committee in the secretariat to Defence down through the DMO organisation, but we are yet to be able to measure just how much improvement is occurring.

CHAIR—You say in your submission that you intend to begin an audit in 2003. Will that encompass the overall management framework? Have you established when in 2003 you intend to conduct the audit?

Mr Cochrane—Our intention probably will be to commence an audit in the first half of 2003 and, under our normal processes, that would take 11 to 12 months to table. That is because there are so many mechanisms in the Audit Act that require us to consult with agencies and give them a chance to comment on draft reports, et cetera. When we do that report, we will start by looking at what has changed with the establishment of DMO and how that is working. We would look at the framework so that we get an understanding of how the control systems within the area are now working. If we come across any significant weaknesses in that framework, we will certainly be making comment about that in any report.

Senator CHRIS EVANS—I want to follow up on that issue. Mr Cochrane, Senator Cook started in the area that I was interested in following up with you. Your status report on major Defence acquisition projects was dated December 2001. Is that right?

Mr Cochrane—Yes, I think it was.

Senator CHRIS EVANS—Do I take it that that is the last time you did major work inside the DMO?

Mr Cochrane—On the performance side. We have certainly done some work on the financial side for each repetitive financial statement. In 2001-02 we did a status report into the major Defence equipment acquisition projects.

Senator CHRIS EVANS—The report I think is dated December 2001. When would you have done that work? I am trying to get the time lines clear in my mind.

Mr Cochrane—Probably for the immediately preceding six to nine months, at a time that the new DMO organisation was being established.

Senator CHRIS EVANS—You finished that work and you put your report down at the end of 2001. As I understand it, you were going to do a full performance audit on the activities of the DMO.

Mr Cochrane—Yes.

Senator CHRIS EVANS—And your composition was to go in originally when?

Mr Cochrane—We had intended to do a full performance audit at the time, and that was basically because the JCPAA had requested us to do a full performance audit on the status of the major projects. When we went in, we could see that there was so much change going on that there would be little value because we would not be able to capture a very stable position. We sat down and thought about it and determined that we would give Defence 12 to 18 months to put some runs on the board with the changes they were implementing and that we would come back in 2003 to see if things had been implemented and were running well.

Senator CHRIS EVANS—When are you going back in to do this full performance audit?

Mr Cochrane—The first half of 2003.

Mr Minchin—The most recent work we have done in DMO is the audit on test and evaluation of major Defence equipment acquisition projects. That was in January 2002. The timing of our return to DMO depends partly on this committee's report, which we would like to see first. We would also like to see the recommendations which this committee, I expect, will make. Desirably, we would like to see the government response to that report, which might be a long time coming. But I just cannot be sure—

Senator CHRIS EVANS—I hope we do not delay your program waiting for all those things to happen, Mr Minchin.

Mr Minchin—No, that would be a long time off. We would like to see this committee's report first, which I expect will be coming out in about January. We have been asked by DMO to stay away for a while until they get their reforms bedded in. I think that sometime in January 2003 the timing would be right for us to return.

Senator CHRIS EVANS—Yes, that is the issue I am trying to get to. Being brutally frank, I was a bit concerned with the suggestion that an organisation that had quite a serious report written in terms of the risks with major acquisition projects could delay the ANAO's re-entry into the field. We have a situation where you have identified some high risks, and yet we have this to-ing and fro-ing about when it might be convenient for you to go back in. I am just trying to get a sense of when you are going back in and what the factors are that influence that. As the joint committee has made it clear—and there is a bit of public interest in this—we do not want a report written some years posthaste that says, 'Yes, it was terrible, the whole thing was out of control and they lost a lot of money.' If there are problems, as it seems there might be, my objective is to make sure that you had access and were alerting the government and the parliament to those projects and not waiting until it was too late. I do not want to be overly alarmist—I am not trying to suggest there are necessarily major things—but, given that concerns were raised, I just want to be clear about how you go back in, when you go back in and who determines that. I was a bit concerned about the suggestion that DMO would say, 'Come back in when we're ready for you,' which worried me a bit.

Mr Minchin—Our most recent report was *Test and evaluation of major projects*, but I should add that Ray McNally is actually on site in DMO now doing a specialist audit on 'Explosive ordnance: safety and suitability for service'. That report will be coming out early in January 2003.

Mr Cochrane—The other thing is the financial audit side. We have a continuing presence in DMO because of the huge impact it has on the financial statements of Defence.

Senator CHRIS EVANS—Mr Chairman, I will leave this issue here. I just want to ask one more question. For the layman, when will you do what you consider to be a thorough risk assessment again on the Defence acquisition projects?

Mr Cochrane—I think it will be part of our 2003 audit, at least in terms of the project management aspects. As I say, in terms of the financial management aspects, we are doing that continuously now.

Senator HOGG—On the same issue: I think this is absolutely important and it is one of the reasons why this inquiry is occurring now, at the formation of DMO or in its early stages—so that we can get some markers put down now so as to test its performance in the future. That is the thing that I want to pursue with you people now. Given that you have delayed the performance audit until 2002-03, how will you establish the benchmarks against which to test whether DMO is performing well? Do you need to be doing work now to establish those benchmarks? How will you relate the performance of DMO to its predecessors so that there is some information available to this parliament to show that the change to DMO has been justified and that the system is in effect working?

Mr Cochrane—I will start, and then I will ask Mr Minchin and Dr McNally to add to it. When we look at these audits, and particularly if you look at DMO as an overall organisation, we tend to look at how well it is governing and managing its overall program. We look for the normal project management criteria—timeliness, some cost management and quality management et cetera—and we work through each of those criteria to see what controls are in the system, how the management reporting is working, and what reaction there is to problems that filter up through the management reporting.

In our earlier reports, certainly when we have looked at the status reporting of the Defence equipment projects, we have looked to see how well that reporting has been occurring—and it has not been occurring very well, I might say. That is one area we would certainly be looking at to see that there is an improvement in the governance of the overall projects—and there are hundreds of projects going on in that area, as you know—to ensure that there is tight management control.

Senator HOGG—How will that be manifest to people such as myself sitting on an estimates committee or a committee such as this? How will we know that there has been an improved performance?

Mr Cochrane—One would hope that if we report on the status of the projects we will see some improvement in terms of the numbers of projects which are actually achieving their predetermined milestones and their predetermined budgets. As we well know, there are a number of projects that have been over budget and behind schedule for many years, so we are really looking to see an improvement in that management.

Senator HOGG—What I am really asking, Mr Cochrane, is whether you have a list of criteria that you could give to the committee now which says, ‘These are the things we’re going

to go in and tick off to measure the changed performance of DMO versus its predecessor, or DMO as a snapshot of today and as it might be, say, two years down the track.'

Mr Cochrane—We would probably be able to give you a page of the sorts of things that we would look for and the criteria that we would draw upon in conducting such an audit.

Senator CHRIS EVANS—You were quite critical in your report about the status reports in DMO and their failure to measure against key performance indicators. What we are really trying to draw out of you today is what we have to do to fix it. We have read your report very carefully, and it is an important contribution to the debate about how we come to grips with this issue, which successive governments of both persuasions have struggled. You have said what the problems are. We want to know how we can test the performance. You are saying they are developing KPIs linked to a balanced score card, which I think was linked to the now departing secretary, and I gather they are not going as well as might have been hoped. What we are really after is the measures we can apply to test whether or not improvements are being made.

Mr Cochrane—Perhaps I will tackle this in another way. There are a number of recommendations that we have made through a lot of our reports, both on the performance and the financial side. They go to improving financial management systems, project management systems, contract management and the provisions that are within contracts and also, very strongly, the governance over the total project book. The Audit Office will go back in through this major project audit in 2003 and also through our financial audits for the next financial year. We will be looking for improvements in each of those areas. There is no single report that might draw up all the answers and say, 'Yes, the financial management of DMO has improved. The project management has improved and, by the way, we have no sleeping issues in any of our major contracts.' Is that what you are looking for—a total overview?

Senator CHRIS EVANS—Yes.

Mr Cochrane—Through each of our reports, we tend to target different areas or different aspects of the management.

Senator JOHNSTON—I want to clarify one thing we have discussed already. Audit Report No. 30 2000-01—as set out in your attachment 8—*Test and evaluation of major Defence equipment acquisitions*, is an audit report of 2000, is it not? The subsequent report is *Status reporting of major Defence acquisition projects* of 10 December 2001.

Mr Cochrane—Sorry, I do not understand.

Senator JOHNSTON—The major report was in 2000, was it not—I do not have that report with me—and since then you have done a status report.

Mr Cochrane—Yes, and then test and evaluation.

Senator JOHNSTON—So December 2001 was the last time we had a look at these projects?

Mr Cochrane—Yes.

Senator JOHNSTON—Going back to the original report, there were a number of recommendations, as I see it, which were very important recommendations and which Defence disagreed with. Are you familiar with those?

Mr Cochrane—Collectively we are, yes.

Senator JOHNSTON—For instance, you suggested that there be an office established that is responsible for ‘common standards’ throughout Acquisition and they disagreed with that. That is one. The user-pays method of assessing test and evaluation was a recommendation that your office suggested as a benchmarking method. That was opposed. You also commented that there was no unified approach to testing and evaluation of these large acquisition items—ships and a number of other examples were set out. I thought it was a very good audit. But it seemed to me that it had a clear theme and inference in it that considerable ongoing audit surveillance was required. When these projects get off the rails, I think we would all acknowledge they get off the rails in a very big way. We have a number of major projects running at the moment. It strikes me that even 12 months in this environment is too long to leave the surveillance. If the original report was back, say, six to nine months, we are talking about the beginning of 2000. We then have the status report, which does not go into anything like the same detail. Can you comment on that for me?

Mr Cochrane—I would not say too much more than what was said before, Senator. At the time we did the second little report on the status of the major projects, we determined that we needed to give Defence a breather for 12 months to make some real changes. Both Mr Watson and I also sit as observers on the Defence Audit Committee. One of the changes that we have seen there is that there is an increased senior management focus within Defence to make sure that the major systems are being at least tracked at the top level, and we certainly have access to that information. It is not that we are totally hands-off. We are certainly not examining in any depth each of the individual major acquisition projects, but we are maintaining a watching brief at a higher level to make sure that at least the reforms are continuing.

Senator HOGG—When you say they are being tracked by their senior officials within the department, are their tracking systems sufficient and effective to do the tracking, or is it just a fairly arm’s length sort of tracking? It is one thing to tell the committee that they are being tracked. We need to know what the tracking system is.

Mr Cochrane—Certainly in both the financial side and the project management side we have not been, and continue to be unhappy with the project management systems and the financial management systems within DMO.

Senator JOHNSTON—That is what we want to know.

Mr Cochrane—That is a clear position. We have given Defence clear notice that we are not happy with those systems. Because those systems are so poor, a lot of the information that goes to management is actually derived from the various project files; in other words, it is not always automated. But at least it is being derived and reported to senior management whereas a couple of years ago it was not occurring at all. So they are at least watching things now and there is some governance going on. The information that is being reported to the top level is directed at time and cost issues: are projects on time; are they within budget?

Senator CHRIS EVANS—But is it systematic, Mr Cochrane? My sense of it, as an outsider, has been, for example, PM keys hits the press, there is a bit of focus on that project; cease-fire hits the press, so we focus on that project. But as you say, there are hundreds of projects across a range of endeavours with varying amounts and sizes of capital budgets. Is it systemic monitoring, or is it crisis management?

Mr Cochrane—Certainly we would be much happier to see the systems in a much improved state to ensure that it was systematic reporting rather than being reporting which, as I say, is derived in a very manually intensive way, in terms of trawling through project files, and making sure things are going all right.

Senator JOHNSTON—I will come back to this point. You made some very important recommendations in audit report No. 30 which the DMO have rejected. This is an opportunity, I would have thought, for you to say why those recommendations were made, why they were considered important and why you advanced them as being as crucial as I think they were. Obviously, where there is a conflict between your assessment of their performance and you give recommendations to arrest the problem, I think we should know why you said what you said. On the issue of a more unified approach to testing, I would have thought that that was crucial. On the issue of offers to standardise the standards within Acquisitions—the measurements software and all the different things that go towards having a comprehensive, easy unit to audit—they are not doing it, and you are telling them to do it. We want to know why you told them, and whether they are winning, and where your suggestions are not being carried out, whether it is causing problems. I note that none of the audit team who carried out these very important audits are here.

Dr McNally—No.

Senator JOHNSTON—I am just looking at the front of these books, and I see who is here. You obviously supervised them, but I note that John Oldfield and Nicole Taylor and others are not here. Can you see the point I am making? That report is crucial. You have said things; they do not agree. We want to know for us to make an assessment.

Mr Cochrane—Certainly I will ask Ray. Ray conducted the test and evaluation audit. Certainly we do see those recommendations as being important. I guess in broad terms Defence rejected them because they did not see that the model we suggested they should be following was the way they wanted to do things.

Dr McNally—Our audit reports argue the point for some of these recommendations or all of the recommendations. When Defence responds in a positive or negative way, we also make a comment. You may see that, throughout the report, where Defence disagree with our recommendation we try to further explain why we made that recommendation. Today we cannot add any more than what we have written in the report.

Senator JOHNSTON—All I am saying is that we are 18 months, maybe more, down the track from those recommendations. It is important that, if you have suggested there be a change, we know who has won the argument, because I think you can tell. There is a lot of money involved. If you have won the argument, obviously mistakes are still occurring and the

problems have not been arrested. That is the only point I make to you on that, because I think we have all explored it quite thoroughly. But I think 18 months is too long.

Mr Cochrane—Certainly we do have some disagreement on that audit. We could be accused of being overly sensitised to the fact that Defence does not always agree with what we say. But certainly we still have faith in those recommendations we made.

Senator JOHNSTON—Is the DMO an easier unit to audit than its fragmented predecessor?

Mr Cochrane—In terms of the audits we have had so far, which has mostly been just the tests and evaluation one since DMO was formed, it has certainly been a little harder at the moment—

Senator JOHNSTON—You have done the fuel.

Mr Cochrane—when you consider the state of flux and change and improvement.

Senator JOHNSTON—You have done fuel management.

Mr Cochrane—Yes.

Senator JOHNSTON—You have done management of outcomes. You have done a follow-up status report and you have done a couple of others. You are in the middle of doing *Cerberus*.

Mr Cochrane—Fuel management was not in the DMO area, though. That is a different area of Defence. *Cerberus* is the same; different area. The main audit we have done in the DMO area is the tests and evaluation.

Senator JOHNSTON—Is property management outside DMO?

Mr Cochrane—Yes. That is DEO.

Senator JOHNSTON—It makes me wonder what DMO actually does.

Mr Cochrane—Yes.

Senator HOGG—You have to get your acronyms right around here.

Mr Watson—Mr Chair, I am in charge of the assurance audit group and I complement what the performance audit people do. It comes back to the question from Senator Evans and you about when to go in and what to do. From the financial statement perspective, it is quite instructive. If you go back to our Auditor-General's report of 2001-02 No. 1, the department clearly indicates that reporting issues remain a critical issue. Senior management do indicate there are problems with data gathering and data integrity. When you look at a financial statement of the size of Defence, say, \$50 billion, and you see, say, \$8 billion or \$10 billion in their assets under construction—which is primarily the DMO, with 200-plus projects—we have to really pay attention to that. So there are fundamental issues in that.

The current secretary in a report just recently to us indicated that the department's management information systems and processes required dramatic improvement, particularly in regard to accounting for specialist military equipment. This goes to the core of the whole thing: the score-keeping systems financially, the score-keeping systems managerially and the score-keeping systems project management wise. They have clearly indicated there is an issue. We are currently finalising our financial statement audit for fiscal 2002. The present under-secretary has indicated clearly to us that there are issues in terms of remediation of his fundamental score-keeping systems around assets under construction, the SDSS and the like. It will probably be 2004 before they can get on top of that.

In the meantime, regarding your question about what do you do and when do you do it and laying down markers, we have a continuous order program from the financial statement side. The department produced a financial statement improvement program. They have done a lot of work-arounds to get to the bottom of what is going on under their assets under construction. So, in a way, we would like to audit systematically but we are forced, in conjunction within the department, to do a lot of auditing on work-arounds to get to whether or not the numbers are true and fair. The forthcoming financial statement report, or forthcoming financial statements, will indicate movements within, for argument's sake, assets under construction.

CHAIR—Is this information management exercise you are referring to the one that Major-General Peter Dunn is in charge of?

Mr Watson—I think he is in charge of the SDSS, the System Defence Supply System. I am making more of a global comment on the record here that there is a clear acknowledgment by the secretary, I think in June—

Senator CHRIS EVANS—What I did not quite understand, Mr Watson—forgive me, I am no financial expert, so I am very much bringing a layman's perspective—but you say you were being forced to work around in terms of your work.

Mr Watson—One of the issues there is that, because of their data integrity and data recording issues, we have to actually belt the numbers around to get to the bottom of it. Because of the problems with the system, the automation of the system—

Senator CHRIS EVANS—So that the information that Defence gives you is not sufficient to allow you to make a fair judgment about—

Mr Watson—It does not come out in an automated way. We have to actually drill down into it and try and get to the bottom of it.

Senator CHRIS EVANS—What are you saying that means for your global ability to audit Defence?

Mr Watson—In the modern day auditing, risk based systems takes the whole drudgery out of the audit process. We are forced to go in, it becomes tedious, it is time-consuming to get to the bottom of whether or not the numbers coming out of the systems are accurate numbers.

Senator CHRIS EVANS—That means you have much more difficulty getting an easy sense of how they are going more globally, does it?

Mr Watson—Yes.

Senator JOHNSTON—What is the solution?

Mr Watson—The solution is resting with the management, and they have clearly indicated that they are a while away from getting the underlying systems and controls automated.

Senator CHRIS EVANS—Senator Johnston may be better at this stuff than me, but why would Defence be any slower than Centrelink or Health at getting on top of that sort of stuff?

Mr Watson—To be fair to Defence, the issue there is one of scale and complexity. It is, pound for pound, one of the biggest businesses in Australia. It is like a Telstra size corporate, so the history of the place with their systems and their accuracy and recording the data integrity problems are major project management issues that they have got to get across.

Senator HOGG—But, at the end of the day, they are responsible for the defence of this country. One would hope that they have got it right within their own department.

Senator JOHNSTON—Yesterday I read that there is a qualified financial audit or qualified—

Mr Watson—I think the article was in the *Canberra Times*, where there was an inference made that the Auditor-General is inclined to qualify or consider qualification on the DMO.

Senator JOHNSTON—Exactly, thank you. What can you tell us about that?

Mr Watson—As I said, currently we are in the process of finishing the financial statement audit for fiscal 2002, and there are issues that we are going through with the department.

Senator JOHNSTON—Can you tell us what some of those issues are?

Mr Watson—This is what I have to be careful about.

CHAIR—If there are matters of confidentiality—

Senator HOGG—In broad terms, without going to the specifics, is that possible?

Mr Watson—Just by way of background, I think the two reports—

CHAIR—Can I just make this clear: if there are matters of confidentiality in answering properly the questions put to you—either commercial or matters of security—you should indicate that to us and we will make a decision as to whether we want to go in camera to hear that, whether we want to persist with the question or whether we will take it on notice.

Senator CHRIS EVANS—Mr Chairman, I think that is right, but I think Senator Johnston and I probably are not keen to go in camera, but it is just a question of trying to grapple—

CHAIR—I am not suggesting we go in camera—

Senator CHRIS EVANS—If the officer feels that he is at a stage where he should not say any more, I think we are probably happy to stop there.

Senator JOHNSTON—If you have any reservations, we will—

Mr Watson—I have reservations, but I can tell you that the issues that we are grappling with have been on the table for a while and, because of the issue, it just takes a while to close them out.

Senator CHRIS EVANS—So you are saying, though, that it would be 2004 before you think they are going to be in a position to resolve those issues?

Mr Watson—Some of the correspondence we are getting from the department tells us that one of the things is at the end of 2003. So it would be implemented in 2003. It comes back to your initial question about when you go in and how you measure the progress.

Senator CHRIS EVANS—I just want to say in response to Mr Minchin—I do not want to verbal him at all, and the other senators can speak for themselves—but the committee would be concerned at any suggestion that there was a delay in your going about your work. One of the reasons we have this inquiry is to add strength to your arm, to make sure that your work is done unfettered and that you get to do what you need to do. So I do not want any suggestion that our committee would be delaying your work or that the parliament is not very supportive of your role in helping Defence to come to terms with those issues.

I think the concern of the committee is the suggestion that somehow you are being held up from doing your function. We do not want you held up from doing your function. I, particularly, was concerned by the suggestion that Defence might have indicated to you they did not want you back until they were ready. I am not very comfortable with that, I have to say.

Mr Cochrane—Let me put that in the context that there is a slight mutuality in the way we are viewing things there because, truly, when we go in there to form a view about how things are going and need to report back to the parliament about where things are at, we need to ensure that we are there at a meaningful time and that we can actually have something solid to report on. At the time we went in last year DMO was in such turmoil trying to introduce new changes that we just would not be able to capture any sort of solid picture to report back. Rather than say it will take two, three or four years, we determined that 12 to 18 months should be a reasonable time period for such a large organisation to show some signs of change. So when we go back there at the beginning of 2003, we will really be looking for some change.

Senator HOGG—One of the features of Defence from my experience with them—and I think I have now been here six years and have been fairly involved in this committee in a number of inquiries—is that change seems to be an ongoing, everyday feature of Defence, and turmoil seems to be an ongoing, everyday feature of Defence. I just worry about waiting for the

turmoil and the change to settle down. This committee did a report last year into retention and recruitment in Defence, and we found in one part that they have had eight inquiries in eight years and are trying to implement change arising out of them—and I might have that wrong, but it was of that order—and they just found it impossible. They became change weary. They found that the recommendations that by the time they started to implement changes from one inquiry, they were superseded by another inquiry or someone else who had moved into the position. Therein lies my concern. I understand what you are saying, but how does one overcome that sort of problem that seems to pervade Defence more so than any other department that I know of?

Mr Cochrane—First of all I have to acknowledge that we share some of those frustrations in terms of the reports that we have done for the last 10 years on the acquisition area. The problems have been repetitive. We really look to see that things are changing, and change is very slow.

Senator HOGG—Why is the change slow? Is it the attitude to us and to you?

Mr Cochrane—Size and complexity.

Mr Watson—Scale and complexity.

Senator HOGG—Or is it that they do not want us getting our fingers in the pie, so to speak, and your fingers in the pie? ‘Leave us alone. We know what to do best. You are just nosy outsiders’ Senator Johnston wants to join me.

Senator JOHNSTON—If I can just say, in comparison to the large number of other departments that you have responsibility to audit, where does Defence sit in terms of its openness, frankness, accessibility and the way they deal with you? How do they compare with other departments?

Mr Cochrane—I think on a number of occasions I would say that access is usually fairly good and we actually do not have any problems presenting to the department, saying, ‘Hi, we’re here to do an audit.’ It would be fairly comparable with most agencies. Certainly they would probably prefer for us not to be there, but I cannot claim it is much different with any of the other agencies.

Senator JOHNSTON—You say that they would prefer that you were not there.

Mr Cochrane—Yes.

Senator JOHNSTON—Do you say that frivolously, or are you seriously telling me that they do not want audits?

Mr Cochrane—I would say that they are conscious that for many years they have had a high public profile, with some failures in contracting, and they are a bit weary of people coming along and telling them they are not getting it right. I would say that was a fair reflection. The submarine project is a good example. We have had two looks at it now, and the real area of difficulty we see is that, between those two looks, there has not been much improvement, with

still lots of problems. Certainly Defence would have been saying to us, 'Leave us alone. Give us a chance to fix this thing.' There is no denial of our right to be there or our right to access any records, but there certainly would be a preference for us not to be there.

Senator JOHNSTON—Is that preference as discernible in other departmental audits?

Mr Cochrane—I do not think it is as strong.

Senator HOGG—But there are other committees, such as the JCPAA, that share the same concerns that are being expressed by this committee this morning, aren't there?

Mr Cochrane—Yes.

Senator HOGG—I am a member of that committee, as I have said.

Mr Cochrane—JCPAA had a very high level of interest in the Defence acquisition area and in the wider Defence area for many years. They probably feel frustrated by the lack of change.

Mr Watson—Again, for scale and context, there are what I call assets under construction, which we call in engineering terms a whip book. You have a \$2.7 billion Capex per year, you have a project life that goes from zero to eight years, with hundreds of millions of dollars going into it. There is a lot of complexity within it. That, by its nature, is a legacy type business. It is like using an assurance in relation—

Senator CHRIS EVANS—Don't use the 'legacy' word to me, Mr Watson. You'll get me going!

Mr Watson—But it has a long tail nature about it, so over a time frame it does require a lot of hard, disciplined action to keep at it.

Senator CHRIS EVANS—As I understand it, Mr Watson, they cannot tell you which properties they own. I am a normal sort of accounting illiterate, but I would have thought a list of—

Senator HOGG—No. You are doing yourself an injustice.

Senator CHRIS EVANS—A register of one's properties would have been a fairly basic thing.

Mr Watson—I can understand your point because the secretary has clearly admitted that their score-keeping systems are not there. For the financial statements, we have to do a lot of work-arounds to say, 'We've got X million or X billion dollars worth of properties. Is it reasonably stated? Is it true and fair?' There is a lot of effort to get to it, because it is not an automated process.

Senator JOHNSTON—Does size and complexity prohibit the efficient and expeditious installation of these systems?

Mr Watson—The answer to that is there is a project management discipline to it to meet the size and complexity.

Mr Cochrane—This is a broad comment—and I do not know that we could actually provide much evidence for it—but also the cultural aspects of ownership of systems and data need a great deal of improvement in Defence and I think Defence recognises that as well. If you do not have people that have a high level of ownership and accountability for the individual systems, certainly progress is going to be slow.

Senator CHRIS EVANS—I saw the secretary in the paper talking about accrual accounting as being one of the great challenges. No-one has been more challenged by accrual accounting than the senators at estimates, as one who is losing that battle, but every other department seems to have come to terms with it and have used it successfully to befuddle estimates committees and to hide information that we are seeking. Why would accrual accounting be more difficult for Defence and what's an update on it? Why haven't they come to terms with it and how long before we can expect them to come to terms with it?

Mr Watson—There are some interesting questions there. Defence, as I said, is an enormous assets and logistics business. You are going from a Public Service culture into a business culture. That is a change reform program of, say, zero to five years or zero to six years. If you go back to the Australian Postal Commission and Telstra, they took some years to get that stabilised. I think that is part of the issue that we are seeing. Invariably, you are moving more into financial management and financial accounting. You have to understand how your capital is being deployed and how your capital has to be replaced.

There is a skill set requirement there—I read the secretary's press statement yesterday. They are grappling with it because there is a fundamental skill issue in there. Where do you go to get the skill set to complement or address that particular reform? Currently, you do not have that sort of firepower in the department. That is why they struggle.

CHAIR—These are important questions, but I just wonder whether we are coming to an end of this phase. I have some questions on the exchange rate and the materiel acquisition and management framework. I want to flag those issues for the committee. We have these witnesses for another 35 minutes.

Senator JOHNSTON—One more question.

CHAIR—I am not saying cut them off—please exhaust yourself—but I want to indicate there are some other questions too that need pursuing.

Senator CHRIS EVANS—We thought we'd just about broken them down, Mr Chairman! I thought they were about to crack under the pressure!

CHAIR—That was not obvious to me.

Senator CHRIS EVANS—No, it wasn't to me either!

Senator JOHNSTON—Is it a situation where, because of the size and complexity, we say that it is acceptable that there be \$1 billion, \$3 billion or \$5 billion lost in contractual maladministration or just the day-to-day operations of this organisation, and because they are chasing technology and they are doing things that are totally different to most other departments and/or businesses? Is there an element of that in your minds?

Mr Cochrane—Certainly when we audit some of the major acquisition projects—for example, JORN—we do receive the response that projects are pushing the envelope. They are out there. They are blue-sky projects, high technology projects, and therefore there is a high level of risk with them. In part, we have some empathy for that view but, having said that, you are right: there is a lot of money involved and we expect that, for a project like JORN, there is a high level of responsibility and accountability for the performance of the project. Often when we do these audits we run into the accountability and measurement issues before we ever get to the basis of whether the project was realistic in the first place.

CHAIR—Can I just go to the question of the foreign exchange risk management practices? On page 3, points 14 and 15, I want to read this bit into the record. At point 14:

The report concluded that foreign exchange risk was not effectively and prudently managed by Defence and other agencies because they did not have systems to identify, analyse and assess the risk. Despite a requirement to assess foreign exchange risk and manage it, agencies relied on budget supplementation to meet the cost. Also, agencies' tendering and approval processes were deficient in the treatment of foreign exchange risk. This can adversely affect the achievement of intended outcomes.

At point 15:

In the project to acquire helicopters for the ANZAC ships, Defence's approach to foreign exchange risk understated the likely cost of the acquisition, which gave decision-makers the mistaken impression that a contract could be signed within the approved budget. Had Defence chosen to manage contract exposures in a project to acquire Chinook helicopters, contract costs could have been maintained at \$56 million, a saving of \$15.2 million.

Managing foreign exchange risk is a major issue, I think, and if you get it wrong you can get badly burnt.

When we are asking agencies to manage it on behalf of public moneys, if we do not have the systems and processes, it is like amateurs playing at Olympic Games level, or it would be like me trying to take the field on Saturday in the grand final—totally out of my league. What can you say now about the DMO and their ability to have in place the proper systems to analyse and assess the risk? Are you satisfied that we have them?

Mr Cochrane—The bottom line answer to that question is that we have not gone back to have another look as yet. There was a multitude of issues, though, with the foreign exchange. One was the introduction of the FMA Act. Most agencies had not recognised that they now had responsibility for financial losses that could occur as a result of foreign exchange movements, and our audit report basically reminded agencies that they did have a responsibility, and even where they had supplementation, they had an initial responsibility to actually manage their FX risk.

CHAIR—It is a pretty damning comment to say that they did not recognise they had the responsibility. Are you now happy that they do recognise this?

Mr Cochrane—Yes. They have at least considered it now. Certainly, the government has gone back and come to a renewed policy position on FX management that basically says, ‘We are going to accept that agencies like Defence will continue to receive supplementation for FX losses,’ but that agencies like Defence should in fact risk—manage their FX positions in their contracts, either through the contractual provisions or through other measures. At least now the agencies are clear about the fact that they have an initial responsibility to understand the implications of FX in their contract.

CHAIR—On that FOREX bracketed stuff, though, of course they should have and so forth. What do you regard as state-of-the-art type procedures for an agency such as this to have in place? Do you have a view about what constitutes a prudent, proper management structure for managing foreign exchange risk?

Mr Cochrane—Yes, we do have a view. I must say it is not always a shared view with agencies, or with central agencies.

CHAIR—No, I am not concerned about what the agencies think. I am really concerned about what you think.

Mr Cochrane—We look at the Commonwealth as being a major corporation, that major corporation incurring foreign exchange exposures, both positive and negative, across a wide range of programs. Our position was that we felt that the Commonwealth should have some central management of its overall FX risk and be making some conscious management decisions about what would happen as a result of that risk, be it to do nothing, be it to hedge the risk or to offset the risk in some other way, or to make sure that, in its basic purchasing procedures and contracts with overseas entities, there was some specific consideration of how FX was treated in those individual contracts, much the same as you would get in any major corporate. That is the position we put out in Audit Report No. 45. The response, of course, is that the government has considered that report and come to the conclusion that, yes, the agency should risk-manage their position but that they felt the cost of hedging was prohibitive.

CHAIR—Do you have a view as to whether they should bring in private-sector expert advice to help them make assessments about what they do on risk?

Mr Cochrane—Certainly, the Treasury does that to a degree at the moment, but individual departments, where they do not have the expertise, when they are drawing up contracts and entering into these very long-term high-dollar value contracts, should look for that expertise and contract it in, if necessary.

CHAIR—Have DMO done that?

Mr Cochrane—I do not know, Senator. We certainly have not been back to have a look since we put that report in.

CHAIR—Did I understand you to say that the department has looked at hedging and baulked at the high cost of it, so nothing was done?

Mr Cochrane—It was a position that was considered by Finance and the Treasury and put to the government. The policy position is that agencies should look to understanding and managing that risk, but hedging was not necessarily an option. They did not think that the cost-benefit was there.

Senator CHRIS EVANS—What are the alternatives, then, Mr Cochrane?

Mr Cochrane—When you enter into a contract, you can look, for example, to denominate that contract in Australian dollars rather than US dollars so that you do not have the exposure. Of course, the counterparty to the contract will not always have that view; they will be trying to do the opposite. But there are some measures you can take.

Senator CHRIS EVANS—Are you aware of any Defence contracts that have been done on that basis?

Mr Cochrane—Some contracts have been written in Australian dollars, yes, but I would hazard a guess and say that most of our overseas contracts are denominated in a currency like the US currency.

CHAIR—I perhaps should know the answer to this question. If you make a loss due to currency movements, you get supplemented from the budget. If you make a profit from them, do you have to return that money?

Mr Cochrane—I think theoretically, yes. We have not been in a gain situation for a while, though.

Senator CHRIS EVANS—I do not think that problem has bothered Defence for a few years, Senator Cook!

CHAIR—That is right. Look at the global economy at the moment and the instability that is there in the economy intrinsically but, as well, given the overview of possible global conflict, who knows what is going to happen to exchange rates? It may well be that the Australian dollar is undervalued in that situation, or it will rise. It may be that demand for commodities will push it up; it may be that it will be valued down. Who knows? It is just volatile. We are looking at an immediately volatile future, I think.

Senator CHRIS EVANS—I will follow on from that issue. Mr Cochrane, you said that the argument was that the cost of hedging was prohibitive. Do I understand hedging right: that, effectively, you pay a price for some protection against severe currency movements?

Mr Cochrane—Yes.

Senator CHRIS EVANS—I do not quite understand why it is argued as prohibitive. It is obviously a cost, but it is a cost of a smaller cost versus the risk of a large cost. It is insurance, effectively, isn't it?

Mr Cochrane—Yes. If you have a contract, for example, denominated in US dollars to be settled at some time in the future, you basically buy US dollars on a forward basis so that you are locking the rate now and you have US dollars available to you at the time you need to settle on the prime contract. Our view in terms of the cost of hedging is that, yes, it can be prohibitive if you are using it in the wrong way and, certainly, if you are trying to hedge a contract too far forward—in other words, the future is well and truly, as Senator Cook was saying, unknown—then there will be a high cost in giving you the certainty of locking in a contract price. But if you are managing the book in a more dynamic, progressive way and not so far forward, certainly it becomes cheaper. All we are saying as an audit office is that, like every other major corporate, you should have a strong policy on FX management, FX exposure, what sort of FX exposures you are willing to accept, and have some sort of responsive management mechanisms to ensure that FX exposure is minimised.

Senator CHRIS EVANS—Does Defence have that policy?

Mr Cochrane—There is a whole range of arguments that go the other way on some of these major contracts—for example, someone gave me the argument only yesterday that the government does not want to be in a position where it is seen to be taking a forward position in an FX market in case that is interpreted as the government taking a prediction on where things are going to be in the future. There is probably some validity in that argument but certainly, at the time we did this audit, agencies like Defence were doing nothing.

Senator CHRIS EVANS—Would you describe what you thought was a proper FX management policy—would you say that Defence has one now?

Mr Cochrane—That is why I say we will have to go back now and look at how they are managing it in some of the major contracts. My guess is that they would at least be conscious now, when they sit down and negotiate a contract, that they need to consider the FX risks. In fact, Finance have put out an instruction to the other agencies saying that they should do just that.

CHAIR—Can I come back to the comment you made about government being reluctant to take a forward position because it might suggest a view about where the economy is heading. I understand that argument. Is this set out somewhere where it is particularly articulated? I think what is relevant to this inquiry is, that is fine; that is a concept I can sign up to at policy level. What we are looking at here is operational level where prudent commercial management has to apply and you can make a disconnect between the policy view and the commercial view. I think that is something we would like to look at.

Mr Cochrane—I think the Department of Finance and Administration would be the right source. They certainly looked at the recommendations that we made in the foreign exchange risk management report and were responsible for drawing up the advice to government about what they saw as a reasonable response to the recommendations made in the report. As a result their work, the government accordingly published a policy on FX management.

Senator CHRIS EVANS—Mr Cochrane, on that practical effect, I see in your 2000 report that you had a figure of foreign exchange losses of Defence of \$2.98 billion, up to April 1999. Do you have an updated figure on that?

Mr Cochrane—No, not available. Certainly the financial statements, when published in the next month or so, would provide that figure.

Senator CHRIS EVANS—They will be in those financial statements, will they?

Mr Cochrane—Yes.

CHAIR—I guess I am thinking out loud now, but if the policy view is not to take a forward position because it might reflect a government view, I would have to say that Treasury and the government are basically obliged to take a rosy view of the economy and its future. To do otherwise would be to damage the concept of confidence of the private sector in the future. So I understand always that whoever is in government does that and that is the view of Treasury. At a commercial level you have to take a prudent view and there is a conceptual difference.

However, if a government, for example, insists that its view of the economy constrains the prudent operation of taking advanced positions here at this level then—and I do not put this in a partisan way—the responsibility for losses, because of a failure to take a prudent position, comes back to a political decision. It really does. We will think about this in our report, but from a political point of view as well as any other point of view, a government may wish to be screened off.

Senator CHRIS EVANS—Take some insurance.

CHAIR—Yes.

Senator CHRIS EVANS—And that is what I have been talking about; taking some insurance.

CHAIR—Yes. I would like to go on to the alliance contracting for a moment. I am sure the ANAO is familiar with alliance contracting. Are you familiar with the Anzac Alliance? What I am really asking is: can you give us your views on alliance contracting advantages and disadvantages?

Mr Cochrane—Certainly the only audit the ANAO has completed on alliance contracting is in relation to the National Museum construction. The result of that audit basically, in our view, said that the alliance contracting in that case had been highly successful, because there was a clear sharing of the risks and benefits between the National Museum and the contractors responsible for its construction. I guess in that case we would have to say that alliance contracting worked well. I can hazard a view, but it is certainly not an audit tested view, that there might be some room for some of the mechanisms of the alliance contracting to improve Defence's position.

CHAIR—You are recommending the standard project management method for alliance contracting.

Mr Cochrane—Sorry, where are you?

CHAIR—On page 70 of your submission you state that each project is different essentially and therefore it is important that projects are managed under a standardised method, preferably one recognised internationally, such as the standard project management method which has been introduced in the DMO.

Dr McNally—That method relates to the way the projects are managed, not the—

CHAIR—Not the concept of it?

Dr McNally—The concept does, but it does not relate to foreign exchange management. It is usually relating to the systems engineering management within the project. The relationship with the supplier of the equipment and—

CHAIR—Yes, I have moved on from the foreign exchange question. I am looking at the alliance contracting issue now.

Dr McNally—It does not relate to the type of contract you use. It mainly relates to the systems engineering process that you are trying to manage. It is really focusing on how you manage all the technical issues which come up within the project and how they are managed in terms of the user requirement needs and the executive needs of that project and the strategic needs.

CHAIR—Can I just go back to the concept of alliance contracting and the museum example. What I understood you to say, Mr Cochrane, is that there is an effective sharing of risk and benefits.

Mr Cochrane—Yes.

CHAIR—In that contract. Have you a view about whether the DMO has got it right? Or is it too soon?

Mr Cochrane—Probably a wider view about contracting, and that is to say that we often use the term in the Commonwealth that we have a partnership with our contractors. In the audit experience if that partnership is really working well some of the features of alliance contracting where you are actually sharing the risks and benefits, like you would in a true partnership, would have some applicability. In other words, it is very easy to use the term, ‘There is a good partnership here,’ but what we really want to see is some really good common understanding of what that partnership is in the contract and, like in any partnership, you share the risks and benefits.

CHAIR—How do you evaluate this, though? In an alliance you have got a partner. If you are contracting in the market you have got competition. How do you make the evaluation from an audit point of view as to from a taxpayer point of view, which is the more effective?

Mr Cochrane—I think that they are not mutually exclusive. You can still go through the tendering process to select a contractor and then you can still consider the style of contract you want to enter into with that particular contractor. From a public competition cost-effective point of view we would still encourage a lot of the tendering activity. All I am saying is that in a

partnership environment you should, in our view, probably share some of the risks and benefits of that partnership in some real way in the contract construction.

CHAIR—This may not be a fair question, but how do you convince someone like me—who is almost a signed up, card-carrying member of belief in competition as an effective efficiency measure—that alliance contracting is a superior arrangement?

Mr Cochrane—I have not seen the two, as I say, as being any different. You can still go to the market and seek a competitive tender, and then the style of contract you have can be an alliance style contract. In the case of the National Museum, as I understand it, they went to the market to seek someone to construct the museum. They had a number of tenderers and when they eventually chose the tender they entered into an alliance contract.

CHAIR—In the DMO case, though, an alliance contractor would be someone who, for a term, in fact would be a monopoly provider.

Mr Cochrane—I understand that is being talked about. I do not have any views about that. I have not seen any arguments that go behind that view.

Senator CHRIS EVANS—I want to take up a related issue, which is the use of external consultants or professional service providers inside DMO. I note they have the highest expenditure on external consultants among all Defence groups, and the figures are quite extraordinary. I also know that they have a range of issues with staff turnovers with the reorganisation, loss of staff, loss of skills, as they have sought to reorganise, and that is understandable.

But I would like an assessment of AO's view about the level of expenditure on professional service providers and what impact that is having on the organisation and its efficiencies, because it seems to be at a very high level and I am trying to get a sense of what issues are involved with that level of use of outside service providers inside the DMO.

Mr Cochrane—We are basically more concerned about whether they have the figures right in reporting the amount of expenditure. On the performance audit side we have not done any assessment of whether their overall expenditure on contractors is cost-effective. We have certainly noted that there is an increasing reliance on contractors, in some part probably related to the changes that the organisation is going through.

Mr Watson—I note from the financial statements and some of the evidence last year—like training, professional services, and consulting; they are the three numbers I had a look at—that they are indeed high and, if you look at the current figures, in the last two years there has been a lot of money spent on that. Provided that is accurately recorded in the accounts—the arithmetic is right, the numbers are true and fair—we move on. I think strategically it is part of the scale, complexity and competence issue; they are using that to reinforce and address their competence.

Senator CHRIS EVANS—Yes, there are two sides to that. One is that they are bringing in skills and competencies that they otherwise do not have. That is the positive way of saying it. They are always saying that they are trying to fill holes because of the reorganisation. Both are probably true. It depends on whether you want to have a sunny view or a darker view. That is

fine. My interest really, though, is what impact that is having on the management of DMO. They have a lot of people from a lot of different organisations filling up bits of their organisation and their key functions, to a point where it just hits you in the face—that this is a lot more than other Defence organisations or other Public Service organisations.

I am really trying to understand what that means for the management issues, because many of these Defence related service providers are involved in a range of other Defence aspects as well. I am trying to get a sense of who is controlling DMO, whose needs are driving it and the management that comes with that. I know it is a difficult question for you to answer. I am trying to understand what aspects of your work might touch on that and how we get a sense of whether or not that is a productive thing or whether in fact that is adding to the difficulties of the organisation grappling with its charter. Maybe I could ask you a technical question. What role do you have in monitoring those relationships and the role of those professional service providers inside DMO? What sorts of impacts would you measure?

Mr Cochrane—We do not really have a role at all, other than to say that sometimes when we are doing an individual audit in a particular area the Commonwealth will consider what use is being made of consultants and why, in an effort to understand the cost-effectiveness of that expenditure. For example, in our audits of Commonwealth asset sales, we always look at the amount of money that has been expended on consultants there. It is not something we have done specifically with DMO.

Dr McNally—There is a table at page 83 of our *Management of major equipment acquisition projects* where we did address the running costs. In that there is a professional service provider section which is related to what was in place back then. I have not looked at the role and use of professional service providers since that time.

Mr Cochrane—One of the comments we made earlier was that the systems do not necessarily always working methodically enough to provide the right answers. In some of the activities there is probably a heavy use of consultants to make up the shortfall in some of those systems in deriving the figures they need to derive. That is one aspect of why the expenditure is probably so high.

Senator JOHNSTON—Are you aware of the Defence Management Audit Branch inside the department?

Mr Cochrane—Yes.

Senator JOHNSTON—How big is it? Is it well equipped? What function does it perform? Given your role, can you assist me to relate to that organisation as an internal device? How many people are in it?

Mr Minchin—Defence Management Audit Branch are the internal auditors for Defence. They have a staff, I think, of some 60 to 65 people across their various major regional offices. We did an audit on Management Audit Branch a few years ago. I do not have it with me now, but I can certainly get you a copy of that.

Senator JOHNSTON—Certainly, please.

Mr Minchin—I am aware that Defence has a review under way at present of Management Audit Branch. It is being done, I think, by PricewaterhouseCoopers and the results of that are still to come.

Senator JOHNSTON—That is interesting. What is your relationship with it? Do they assist you? Do you go through them? Do you get their materials or do you just independently do your own assessments? Are they involved in your work in any shape or form?

Mr Minchin—We have to consult them in setting our annual audit work program, as do the financial auditors, and we have regard to their reports when we are doing our own to see what relevant reports they have done. We do find them useful.

CHAIR—We are coming to the end of our time. Are there any further questions?

Senator CHRIS EVANS—I have a quick one on a related issue, as well. Again, it might be pushing you beyond your level of expertise. It is probably more on your comfort zone. I want to ask about the number of staff involved in project management inside DMO. We have discussed the issues about the problems of project management and I wonder whether you have any way of measuring the efficacy of the number or the size of project management. There is an argument around, I think, that DMO has excessive numbers of staff involving project management and that is part of the complexity—the numbers of people involved. I am seeking any views you might have on whether that is a fair assessment or whether you measure those things, or whether that is a factor that you come across in your work.

Mr Cochrane—In the first major report that we did on acquisitions we commented on the staffing situation, insofar as there is a problem with continuity of project managers. Because these projects go on for such a long period of time—

Senator CHRIS EVANS—Yes.

Mr Cochrane—and the staff turnover is so high, it is very rare in a major project that you will find that someone has actually managed it from the beginning to the end. I think there are about 1,200 people.

Dr McNally—Five thousand five hundred civilians and 2,700 military in DMO.

Senator JOHNSTON—How many was that?

Dr McNally—There are 5,500 civilians and 2,700 military personnel.

Mr Watson—I think you could say 9,000 all up.

Senator CHRIS EVANS—Yes, I was particularly interested in the issues that go around a project. We talked earlier about accountability measures and performance measures. I was wondering whether you had any views on it. I note your comments about continuity and I certainly share them. That is a major issue you run into all the time. But it is also this question

of the project management staffing and it goes back to my earlier question about the use of contractors, et cetera. I am just trying to get a grip on some of those issues.

Mr Cochrane—Certainly one thing we could probably be comfortable in saying is that if the systems can be improved so that they are working well and things are happening automatically, then logically you would expect to see a more efficient organisation.

CHAIR—Thank you very much, Mr Cochrane, Dr McNally, Mr Minchin and Mr Watson. That concludes this part of our evidence.

Proceedings suspended from 11.29 a.m. to 11.45 a.m.

BROWN, Mr Gary Maurice (Private capacity)

CHAIR—Welcome to the inquiry, Mr Brown. You have lodged a submission. Do you wish to speak to it?

Mr Brown—Yes, Mr Chairman.

CHAIR—Please proceed.

Mr Brown—I have a couple of minor corrections I would like to make to my written submission, if that is all right. In paragraph 21, line 1, on page 4, the word ‘ought’ should be caught. On page 6, the fifth dot point and second subpoint, the phrase ‘escapes using’ should be ‘escapes by using’. I left out a word. Finally, in annex A, item 1, the last paragraph of that item in the second line, ‘account to for stores’ should just be ‘account for stores’. I do have a little note here which I can provide to Hansard with those corrections.

CHAIR—That would be useful. You have pointed them out, but a note would also be very helpful.

Mr Brown—I do have some introductory remarks, Mr Chairman.

CHAIR—Please proceed.

Mr Brown—I do appreciate the opportunity to give evidence today. In one sense, this submission is from a taxpayer who happens to have a bit of expertise and who is not terribly pleased with how some of his money is being spent, but of course there are wider issues than that. We spend money on major projects to add capabilities to the Defence Force. If a project goes bad, capabilities suffer. In different ways, our submarine arm, our infantry mobility and broad area surveillance have all been compromised. Capabilities should be delivered in planned quantities close to the contracted cost and delivery time. We are here today really because this does not happen often enough.

Before turning to the defence organisation, I should say—in fairness and for a better understanding of the issues—that there are mistakes by all the actors in the defence procurement process. Governments and the private sector, as well as Defence itself, have contributed to the record of underperformance. This means that whatever is done by or to the defence organisation to address the problem will not, by itself, be sufficient. Government and contractor behaviours also do need attention.

Governments dislike negative publicity and often seek to minimise or cover up problems. Sometimes they try to shoot the messenger rather than heed the message. These are natural enough reflexes for governments, but they are unhelpful. Governments sometimes act arbitrarily and disrupt ongoing processes and I have to say that both the former Labor government and the present government have done this with the submarine project.

CHAIR—You've just offended all of us at the front!

Senator HOGG—You've done very well!

Mr Brown—The present government, sir, aborted an almost complete selection process in order to impose its own choices for a new Collins combat system. This ignored the advice of its own expert panel, Messrs McIntosh and Prescott. Now we have to pay \$400 million—and I do hope they are Australian dollars—for problematical modifications to an American combat system, when there is a proven in-service German system available at maybe half that price. The American system must be modified by a country that has no experience of conventional submarine operations. If the modification proved difficult, there could be yet more unplanned costs and delays. Meanwhile, the service life of the Collins boats is ticking away. We have yet to get one day's service from these boats at the planned level of capability.

On the private sector, potential contractors sometimes bid for projects that are at the margin of their competence and then find themselves out of their depth. Sometimes firms might underbid for a project to win the tender and be financially embarrassed performing the contract. Underbidding is encouraged if governments or the department do not hold contractors to contracts. Companies think, 'Why not? The department won't sue us. The government won't push us. We can underbid.'

Turning now to the defence organisation, my submission documents a clear pattern of behaviour by Defence, leading to several unsatisfactory outcomes. Persistence of this pattern over decades shows the extent of the problem and it is a current issue. I refer the committee to the recent audit report on defence facilities management at HMAS *Cerberus*, which was Audit Report No. 3 of 2002-03. The audit found unnecessary costs as a result of inadequate contract management and inconsistencies in contractor accountability. This culture is widespread in Defence. It is not confined to major project management and so it will be particularly difficult to root it out.

The Audit Office submission to this inquiry—and I gather you have just heard Audit before me—retails just some of the failings in defence project management. I do pay tribute to Audit, which for decades has fought a losing battle against defence department indifference, hostility and even, on occasion, ridicule.

I think the new DMO structure is very promising—a genuine reform. I have no significant objection to it, but it will not be sufficient. We require cultural change involving all the players—government, the department and industry. Without this, the DMO restructure alone is not going to achieve a lot. There should be no more reflex denial of problems. Sweeping them under the carpet just makes lumps that we trip over later. It wastes time and money. It imposes capability costs on the ADF and dollar costs on taxpayers.

Improving Defence's performance depends on maintaining the high standards that were set by Minister Moore. Nothing concentrates a senior bureaucrat's mind more than the prospect of being called to account by his or her minister or by a committee like this. If the department is constantly scrutinised by people who will hold it accountable, it will lift its game. If vigilance is relaxed, it may well slack off a bit itself.

To improve contractor performance, contracts need certain requirements as standard provisions—not some fixed form of words, but provisions that protect the Commonwealth interest in risk management, milestones for payment, non-performance. It is vital, of course, that both the government and the department enforce these contractual provisions. Non-enforcement encourages underbidding. Let one or two non-performing contractors be hit with substantial legal penalties and I guarantee that future bids will be realistic and closer attention paid to meeting targets.

There needs to be an appropriate departmental relationship with contractors. A broad strategic partnership with industry is fine, but the department needs to be a careful customer. Broad partnership does not justify a cosy micro-level relationship, where each protects the other from the consequences of their mistakes. We cannot ever again afford to see findings like those the Audit Office made on the department's relationship with the submarine contractor. It is important for the future that management of major Defence projects is effective. We have two huge projects just under way—the airborne early warning and control project, and Air 6000, the RAAF fighter strike aircraft. These are high-tech, high-risk projects. Constant vigilance is needed to keep them and other future projects on the rails.

Mr Chairman, this inquiry matters because, as well as addressing taxpayer concerns, it can provide a powerful incentive for improved management. Major defence procurement involves not just a lot of money but also our national security. It is too important to be allowed to go on as it has been, and your inquiry is an opportunity to support the high accountability standards Defence acquisitions require.

Senator CHRIS EVANS—Mr Brown, that was a very interesting submission you made. I wanted to start with this issue which you have quite rightly identified, which is the question of the enforcement of contractual obligations which seems to be at the heart of many of the problems, as I see it. I know the modern language is about partnerships with private providers, alliances and whatever, but these problems have been going on for a while. I wondered what your understanding was of what the core of this problem has been—that government contractors and other large organisations have no trouble holding contractors to account in other areas, but there just seems to be an inability to do that inside Defence.

One of the arguments put to me is that, in part, it is because in Defence the customer is always changing its requirements during the contract. The problem is that Defence never actually quite makes up its mind what it's buying and therefore to then punish the contractor is difficult, because they have always changed their order. Do you see that as a major part of the problem? What do you think is at the heart of this issue that seems to have bedevilled Defence?

Mr Brown—There are two points there, Senator. I think at the bottom of it all is simply a lack of will. If it becomes known that a major contractor is going to be taken to court for non-performance, this can have—particularly with the large big-news projects—negative political implications and so perhaps there is a lack of will on the part of governments on occasion. There may be a lack of will on the part of the department, because it may involve admitting that the department has, likewise, made mistakes. As far as the changing of requirements post-contract signature go, yes, that has been a problem for a long time.

I noticed Senator Hill, the minister, made a speech yesterday and he was arguing about the extent to which there were cost overruns in Defence procurement. He justified some of the overruns by pointing out that these were due to increased capability requirements. I think it is probably important that governments not adjust capability requirements once they sign the contract. If they do, of course they have to carry the cost. That is right. Contractors cannot be expected to pick up the tab for increased capabilities if Defence suddenly decides it wants them. But making these changes once a project is under way can disrupt the entire project scheduling and management strategy, depending on how significant the capability changes are. In the broad, it is not a good idea to mess with the contract specifications and requirements once they are agreed. We should get them right in the first place.

Senator CHRIS EVANS—One of the arguments put to me is that it suits both parties, in a sense. The contractor bids low in order to win the contract. That suits Defence because it can argue to government that it has come in under what was said it was going to cost or the global figure for the contract is lower. Defence has really underestimated its requirements or accepts that there is going to be some blow-out in its requirements which will increase costs, but it is in everyone's interests to have this contract at the start that, if you like, underestimates cost and does not take into account Defence's full needs. There is almost a Stockholm effect where they are in it together and then they have to justify the fact that the requirement and the cost go up, but their mutual interest is in that relationship once they have signed. Do you think there is any evidence or any support for that proposition?

Mr Brown—I think there is plenty of support for that proposition. I think the evidence for it is in the outcomes of several major projects. The audit reports on JORN and on Collins, the second report on Collins, and also the Public Accounts and Administration Committee report on Collins all show this phenomenon of changing specifications and requirements once the contract has been signed. In one sense, to put the worst possible interpretation on it, you could say it was almost a conspiracy between the department and the contractor.

The department get a low bid which they can then take to government and get approval for more easily than a high bid, and then two or three years later they say, 'Oh, yes, and by the way, we really do need to add in capabilities X, Y and Z, and of course this will add X dollars to the project cost,' and then they get the approval. The upshot is that they now have a project much more elaborate than was originally intended, without having to go through the trauma of getting the approval for the higher cost at the outset, and this creates the perception of course that the project is blowing out. Had they been straight-up in the first place and said what the real requirements were, then this would not happen, but of course perhaps some projects would not be approved.

Senator HOGG—Does the new two-phase appraisal system, though, cut that down a bit?

Mr Brown—I think it could. As I said to Senator Evans, this is largely a question of will rather than of process, but the two-phase process, the two-pass process, that the minister spoke of yesterday at least gives government a second opportunity before contract signature to assess whether or not the specifications and the capability requirements that are written into the contract are realistic or whether or not there is a danger that Defence will be back to them in two or three years, looking for additional capabilities.

CHAIR—Can I just take this on in this way: is it possible to say, do you think, that Defence's weakness in fact lies in its failure to properly analyse what its capability needs are in the first place, and that there is a failure or a breakdown between the capability of people or people specifying capability as opposed to the people in charge of procurement?

Mr Brown—There could well be a failure of communication at that level. The impression I get, however, is that Defence does understand quite well what its capabilities are, but that in much the same way as a contractor might underbid to reduce the cost, Defence might underspecify to reduce the deterrent effect to government of putting in a very large request for approval, with a view to renewing a request for further funds later down the track.

Senator JOHNSTON—Mr Brown, thank you very much for your submission. I must say I did enjoy reading all of the historical background. Prince2: are you familiar with that project planning system?

Mr Brown—I cannot say I am intimately familiar with it. I am aware of its existence and I have read some literature on it, yes.

Senator JOHNSTON—Do you have any opinion as to its applicability and viability in terms of Defence Materiel projects?

Mr Brown—I tend to be inherently suspicious of the idea that there is any given model or paradigm which is going to be applicable across the board. A lot of the things that you see in methodologies like Prince2 are really little more than commonsense, but whether the precise procedures and processes that are set out in that very elaborate system—and I have not read the manual but I have seen it, and it is pretty thick—are applicable in all cases and whether they should be made mandatory—or the approved process—I think is perhaps questionable. I think particularly when we are talking about these very large projects like AEWC or JORN or warship construction, or indeed major aircraft acquisitions, you do to some extent have to make up the rules as you go, but by that I mean that you make up the rules for the project before the contract is signed.

Once the contract is signed, you have your set of rules. They are more or less in the contract—what everybody has to do, what Defence is required to do to make the contractor's life workable, what the contractor is supposed to deliver at what price and when. But to use any particular management paradigm as a mandatory or a broad approach is probably going to be a mistake because these major projects tend to differ so radically.

The only thing I would say is that, in the past, problems with projects have tended to involve what is sometimes called in the trade 'metal bashing'—the construction of warships. But these days the major problems appear to be in software integration. That was certainly the case with JORN, and although there were some traditional metal bashing problems with Collins, the real problem there was and is, and probably will be, the combat system.

AEWC, which is just getting under way, is clearly a software-intensive exercise. I think the minister said yesterday there was something like four million lines of code. So it is perhaps the case that there needs to be a paradigm—obviously not Prince—for software integration. The minister did say yesterday that he was looking to have a more software-literate department.

Certainly in the acquisitions area I think that is highly commendable and something that needs to be pursued pretty urgently, given that we have these software-intensive projects already running.

Senator JOHNSTON—In paragraph 12 of your report, after discussing JORN, you indicate:

The JORN project, for example, is indeed a “cutting edge” exercise. However, the Audit Office found that though the contract required “formal and systematic risk management ... the JPO [Defence Department JORN Project Office] did not seek to enforce the requirement”.

You say in paragraph 12 ‘one can only speculate’. Have we heard your speculations on that? Is that the conspiracy theory that you have?

Mr Brown—As I say, the conspiracy theory was the worst possible interpretation. I was not seriously advancing it as a regular paradigm.

Senator JOHNSTON—What speculations do you want to tell us about?

Mr Brown—I suppose in that particular case, the speculation I would make is that there was a feeling that the project was going off the rails, that it would be extremely bad for this to become known, but that we can probably fix it. I think this is the fatal error that is made. It is not so much that we really want to cover everything up forever, because sooner or later it comes out, and, of course, the longer you delay, the worse the publicity is when it finally does hit the deck.

But I think there is a mistaken belief that we can fix it and then nobody need know. This was certainly the case with the Collins combat system. There were opportunities in the early nineties and the mid-nineties to dump that system. They were not taken. There was a mistaken belief in and commitment to inappropriate choices that had already been made. I suppose it is only human. That is why I say that I suspect that the cure for these problems is more in cultural change than in organisational change. As I say, I do not object to the DMO reforms at all—I think they are valuable—but it is really a question of culture. You find that, even for something as trivial as managing facilities at HMAS *Cerberus*, Defence will not press contractors, will not enforce contracts. We are only talking small beans there, and if you find that there, it is no wonder that you find the same thing in major Defence procurement as well, because the department appears to be full of that kind of culture. But I do not think it is so much a conspiracy as a mistaken belief that we can fix it so nobody need know.

Senator JOHNSTON—Does that viewpoint also apply to your subsequent discussion of the periscopes and the diesel engines?

Mr Brown—No, that is much more damning in its own way. Periscopes and submarine diesels are very well understood technologies. There is not a major software integration issue there. My understanding is that the problems with the diesels came down to the fact that Hedemora had not built diesels of that magnitude, of that size, before, and that they recommended an inappropriate operating RPM. The effect of this was to cause the diesels to become unreliable. There were problems with the gear train, and the sea water getting in the fuel, and things of this nature. Once they, more or less by trial and error, discovered an adequate

RPM, a proper RPM operational speed for the diesels, some of these problems began to go away.

I do not know enough about the periscope problems to say precisely what went wrong there but, again, the root cause was probably in the specification. We specified a brand new—as they say—all-singing, all-dancing periscope. We specified diesel engines and ordered them from a manufacturer who had not built anything that big before. Had we gone one step down in periscope capability and said, ‘We’ll take the standard periscope that everybody uses or with that level of capability. We’ll take diesels that are proven and in service,’ I doubt if we would have had the problems with the diesels or with the periscopes.

Of course, turning to, say, submarine noise, it was simply astonishing—and I do not know how this can be justified—that McIntosh-Prescott had to say that they did less tank testing on a model of the submarine before they built it than would be done on a merchant vessel.

Senator JOHNSTON—Is it about the level of financial commitment at the front end of a project?

Mr Brown—I would not have thought so. Tank testing is not that expensive in terms of a \$4 billion to \$5 billion project. I really do not know what happened there. I have been in this game for a fair while. When I heard that there were software problems with the submarine, I was not surprised, but when I heard that the boat was noisy, I nearly fell off my seat, because I could not believe that you would build a submarine without adequate tank testing to verify the hull form first. But they did. I have been to ASC and over to HMAS *Stirling*. They are basically fitting new bits of plastic hull form to the boats, to change their shape so that the hydrodynamics are now better, but that should not have been necessary. We should have got the shape right before we built the first boat.

Senator CHRIS EVANS—Can I take up a couple of those issues. I use the Seasprite as an example. I stumbled across the Seasprite issue because a couple of Navy people kept saying to me, ‘Those helicopters for the Anzacs keep getting delayed.’ Without overemphasising our role in it, we put a few questions on notice and finally the answer came out, which was your point about no systemic reporting about projects which are in trouble. It was almost as if it had to be discovered, it had to be dragged out.

Mr Brown—Yes.

Senator CHRIS EVANS—There was no actual mechanism to report on the Seasprite. The annual report said that there had been some delays, et cetera, but it is all very softly written. It effectively does not tell you that the thing is an unmitigated disaster, and so it is four to five years down the track before you get any sense of public awareness and then of the minister coming to terms with it. I am sure it came as a nasty shock to the new defence minister as well. That seems to me to be part of the problem, which you highlighted earlier, that problems are kept concealed or at least do not see the light of day and therefore do not get resolved very quickly either.

Mr Brown—Yes. This is one of the reasons I say in my submission at paragraphs 53 and 54 that there is a case for bringing the Department of Finance and Administration more fully into

the Defence annual portfolio budget process. They are not specialists in Defence procurement, of course, but they can provide some check on whether or not money is being spent on non-performing projects. They can check whether a project has met its milestones for the year and they can, in an extreme case, pull the plug on funding for next year. But Defence is exempt from this kind of scrutiny. There has always been an argument, which I have never supported, that Defence budgeting is special because projects run over many years and Defence needs certainty in its funding and so on. Defence has managed to get itself exempted from this kind of scrutiny.

I remember when I was watching the inshore mine hunter project, the MHI, which eventually produced two boats that sat in Sydney Harbour for six years or so and were then decommissioned after about \$110 million was spent on them. I remember thinking that, had Defence had to go to Finance every year to justify the payments it was making on that system, on the MHI, the MHI probably would have never even hit the water and we would have saved an awful lot of money.

Senator CHRIS EVANS—That is the point, isn't it? I think one of the issues this committee has to grapple with in this inquiry is how you build in those accountability mechanisms. One response for us would be to say, 'The Audit Office have been working with the department and change is occurring.' That would be the softer option. A tougher option is to say, 'What other regimes should we be putting in place that provide the level of accountability that would help us deal with these issues more effectively than we have in the past?' I am interested in whether you have any ideas on other methods of accountability practised in other countries or in other examples of administration which we might look to to ensure that we are getting that sort of reporting accountability outside of Defence.

Mr Brown—The US, of course, have a different system of government, but their congressional committees go through the Defence budget every year one line at a time and they call witnesses, who have to explain why a particular line item is not running according to schedule or budget. I do not think that that is a practical option for a Westminster parliament. For that reason, I suggested in my submission that DOFA be brought into the process. It might be the case, however, that it could be equally appropriate to bring Audit itself—ANAO—further into the process.

Audit is now an arm of the parliament after the financial reform legislation of a few years ago. It is not accountable to the executive any more. It may be that a combination of Audit and DOFA—Audit perhaps to look at the broad strategic implementation of project management in particular cases, which is something it struck me as being very good at over a long period of time, and DOFA to look at the fine line item stuff—might get you to the point where at least a project will not continue to deviate from schedule year after year until finally the wheels fall off and we all find out about it.

Senator CHRIS EVANS—Yes.

Mr Brown—If it could be stopped in the early stages, there are two advantages. One is that the negative publicity is much less because the project is not very far off the rails yet; the other, of course, is that we save a lot of money.

Senator CHRIS EVANS—I want to take you back, though, to your dismissal of the US model and raise with you the argument that what this parliament does through the Joint Committee of Public Works is very similar to that in terms of authorisation of public works. With the evolution of Senate estimates committees, we are going much more down that track in holding the executive accountable. The US model might not have some value for us in terms of Defence in that public accountability—if not line by line, most certainly project by project.

Mr Brown—I had not thought of applying the public works committee model to Defence procurement, Senator, but now that you mention it, there could perhaps be a case for it. Projects of more than X million dollars—I guess you might have to change the name of the public works committee or give it to another committee—would require committee approval and perhaps the committee could do reviews annually of projects of more than so many million dollars. But as somebody who worked in Parliament House for nearly 30 years, I would have to say that that is going to require substantial resourcing of committee staff to be a practical proposition.

Senator CHRIS EVANS—I am sure you would agree, a good end in itself. Seriously, though, the Joint Committee on Foreign Affairs, Defence and Trade is one of the most powerful and one of the best resourced committees of the parliament. It seems to me that there may be a role for them in that sort of examination and/or obviously the Senate committees. I do not want to labour the point but it seemed to me that we might have to look at beefing up that parliamentary scrutiny, not only as a way of earning accountability but actually getting some public focus on those issues at a much earlier stage, because what happens now is that it is always reactive. We find out about it when it is a disaster and it is too late.

Senator JOHNSTON—Very good point.

Mr Brown—Yes, Senator. I do not object to anything you have just said. I think those mechanisms, or some variation of them perhaps, would be entirely appropriate and may, indeed, help us keep projects on the rails in their early stages, because it is in the early stages that the critical decisions are taken which cause projects to go bad later. It is conceivable, for example—and I am not suggesting that anything has gone wrong—that decisions have been taken now which will cause the airborne early warning and control project to go off the rails. We will not see that for another three or four years. The proof of the pudding is in the eating. The minister said yesterday, ‘It’s on time and on budget.’ I have no reason to doubt that; it probably is right now. Whether it will be in three or four years time depends not on what happens in three or four years time but on what is being done over there right now.

Senator JOHNSTON—Mr Brown, an underlying theme, I think, in paragraph 49 is to do with the responsibility of the various officers and the configuration of management. Do you have a view about service personnel as opposed to civilian professional personnel in the DMO?

Mr Brown—This is a vexed issue. Service personnel cannot be excluded from this process. They are going to be the users and, having sat around bureaucracies for a fair while, I do not know how many times as a user myself that I have cursed and sworn because somebody has imposed a piece of software or some bright idea without consulting users first. You cannot just exclude them from the process. I would also say that the ADF—and I think I said this in the submission—performs very well in the field. Operationally, we make very few mistakes. We have had one or two, but we seem to have the capacity to learn from them. That tells me that

inside the ADF there is a culture of learning from experience but inside the civilian bureaucracy there does not appear to be. Therefore, I think it would be a very serious mistake to cut the civilian bureaucracy away from this culture of learning that the ADF has.

That being said, the other side of the coin is that the ADF will always want the very best specification and technology it can get its hands on; it is only natural. There has to be some restraint on the demands that the military put on government and on the taxpayer. Therefore, the civilian component is equally necessary.

Senator HOGG—In your document there is the heading ‘Principal Points, Issues and Recommendations’. At page 4 under the heading ‘Disturbing aspects: a decades-old pattern’, you say in the first sub dot point of dot point (1):

... there is no evidence of improvement; rather the pattern persists to the present day. This shows that the DO has not learned enough from previous mistakes or, indeed, from its successes ...

...

... it makes the same or similar mistakes over extended periods of time ...

How do you fit that in with your last comments?

Mr Brown—I do not see any inconsistency there. What I was saying was that the ADF in the field in its operational role has this culture of learning from mistakes. It is when you put them in an office and tell them to manage something, in collaboration with civilians, that the problems I am talking about arise.

Senator HOGG—Why do they arise? Why have the problems persisted over a long period? Is it due to the inexperience of the people who are getting to the top in these positions and then, because of the need for promotion, moving on to other areas and the expertise that they might gain in a short period is lost?

Mr Brown—It is due to that, certainly. The rotation of people in and out of key project management positions is a real problem. You can have somebody who is good at a job and, after their two or three years is up, they get moved on and somebody else has to come in. No matter how good they are, they have to go on the learning curve. Of course, if they are no good, then there are longer-term consequences. That is part of it. Rotation is part of the problem, yes, Senator. The other part of the problem is that Defence has persistently resisted the notion that project management and procurement is a specialist activity, a career path in its own right. If you have somebody who is good at project management, you do not send them off to command a battalion, or you should not. You should leave them to manage projects at which they are good. The notions of a career path at the moment are that you cannot do that to, say, an Army officer because it disrupts his professional service career path. The same problem can arise with civilians.

Senator HOGG—Does that mean then that the person commanding the projects should be a military person or a civilian?

Mr Brown—I do not think it matters in a particular case. I would not want to be making a recommendation that only military or only civilian people should be put in charge of projects. You pick the skills; whether they wear a suit or a uniform should not matter.

CHAIR—Mr Brown, I found your submission and your evidence very interesting and absorbing and I thank you for that. One of the comments you made to Senator Evans, I think, or it may have been in your remarks in chief, was that what is required here is a cultural change at all levels—government, department and military.

Mr Brown—And industry.

CHAIR—Without appearing to be churlish, that is an easy thing to say. You may wish to take this on notice. If you were sitting in our seat, what would you recommend be done to make that cultural change?

Mr Brown—I do not think I need to take it on notice. The things I recommend are essentially the things I put into my submissions.

CHAIR—Yes.

Mr Brown—We require a system of accountability that does not allow the focus to slip. We require provisions to be written into contracts and, above all, we require those provisions to be enforced. The test of the present reforms that the government is speaking about is going to be the next time a project starts to go off the rails and whether the department and the government are going to be prepared, instead of allowing the contractor—as they have, for example, with Bushmaster—to get away with it by producing a fewer number of vehicles, 70 fewer vehicles for the same cost, to take the contractor to court and say, ‘You contracted to deliver not 299 but 370 Bushmaster vehicles. You’re only now going to deliver 299, and we require that you make up the difference.’

The objection to this in the past has always been that you can drive the contractor into bankruptcy that way, to which I respond, ‘Yes, that’s true, but you’d only have to do it once or twice,’ and then you get cultural change.

CHAIR—Isn’t part of the culture change—you made reference to this in your remarks—to bring the department of finance into this game in a bigger way?

Mr Brown—Yes, I think so. As I say, Defence has been able to avoid this detailed level of Finance scrutiny that most other departments have to put up with. I think that that has encouraged the culture in Defence that it is perhaps less accountable to external agencies than it would otherwise be. If Defence did have to justify quantum of payments annually, I suspect that it would probably be a little more rigorous in its enforcement—in other words, you would get a culture change.

CHAIR—Yes. I must say I am a bit attracted to that. Having sat on the Expenditure Review Committee of cabinet for several years and watched the department of finance hunt every last dollar down and make departments accountable, you can applaud that work by the department of finance. Sometimes you cannot applaud the excessive zeal or lack of balance in the way in

which they pursue it, but you need someone to do that work. When you look at some of the cost overruns and money that gets burnt here which could be used elsewhere—in a budget or could be used to improve Defence—there are big bucks that really do not have that type of scrutiny.

Mr Brown—That is right, Senator. That is why I put it in my submission. I think DOFA needs to be brought into this and, as Senator Evans has suggested, perhaps parliamentary committees could take a more extensive role and also the Audit Office.

Senator CHRIS EVANS—You do have to add a note of caution to all this, though. The Bushmaster is a good example. It would be unfair of politicians not to note that the factors at play in decisions like that included questions of regional employment and what the impact of not pursuing the contract would be for Bendigo. These are the things that weighed on the minister. I am actually speaking in the minister's defence there, but the broader political issues that flow from regional employment, et cetera, were factors there. Even in a broader sense, around the same time there was a decision on whether ADI would be allowed—and the Foreign Investment Review Board—to have more than 50 per cent overseas ownership, which impacts on their viability, economics, et cetera. A number of the projects you were talking about earlier have been driven by political decisions by governments in relation to decisions about buying American, et cetera, so I think we have to have a bit of balance in terms of Defence. They are driven often by decisions of governments of both persuasions that have broader political, geographical and economic considerations that overlay on the straight economic stuff.

CHAIR—We are debating it now, but every department that appears before an ERC process with a submission involving expenditure has those sorts of considerations attaching in one form or another, to some degree or another, to their requests. The key thing here is to know what the cost of those decisions is and to weigh the cost against what the perceived benefit might be. There is a perception that there would be a benefit in doing something in regional Australia which has a cost to it. There needs to be a process, I think, in which you know what that cost is so you can weigh it against the benefit and there is a degree of transparency. I think that cuts down on the propensity for pork-barrelling or for trophy type allocations of industry, which really have little benefit other than the glimmer of the announcement and something else later on. But we are now, as I say, debating it.

Senator CHRIS EVANS—I thought it was an interesting point and I was responding really to Mr Brown's comments. I was happy to concede that we are part of the problem.

Mr Brown—If these kinds of politically imposed costs—for example, it is decided to produce a particular item in a particular town for regional employment reasons—are up-front, then at least the costs associated with them are not going to be sheeted home to the Department of Defence as being its fault.

CHAIR—That's a defence for Defence! A balance!

Senator JOHNSTON—I have one issue. Mr Brown, your submissions are very strong and very succinct on the analytical side of things. Do you have any knowledge of the personnel inside the DMO and the status of their morale, given that they are under quite considerable scrutiny in a very volatile reform mode? Is there anything you want to tell us or bring to our attention about the nature of their morale and anything you want to suggest which would be of

assistance in getting some sort of cohesion—and I am anticipating your answer—into that office?

Mr Brown—I do not have a detailed knowledge of what the state of morale is inside DMO. From what I have read in the open-source literature, as one might expect, given the level of scrutiny and criticism that the organisation has had to put up with over the last several years, morale is probably not the best. The way to fix that—and I speak here as a former member of an organisation that once had the Audit Office go through it like a dose of salts—is to get the pain over with as soon as you can. Instability is the most corrosive factor in morale, in my experience, in Public Service organisations. Once it is realised that there have been mistakes made and we need to do something, fine, we do it. We put the new structure in place, we put the new people in place and we then say, ‘Look, you can now expect some stability, as long as you perform better than was the case in the past.’ Over at DMO, they are probably saying, ‘I hope this is the last reform for the next few years, so that we can actually sit down and do our jobs without some whacker coming through and telling us that the whole office has to get restructured again next week.’

CHAIR—Thank you, Mr Brown. It has been a very useful and interesting session. Thank you for your submission and your comments.

Mr Brown—Pleasure, Mr Chairman.

Proceedings suspended from 12.32 p.m. to 1.33 p.m.

AHERN, Mr Raymond Geoffrey, Senior Consultant, Defence Materiel Organisation Client Manager, Tanner James Management Consultants Pty Ltd

CHAIR—Welcome. Mr Ahern, we will ask you to address yourself to your submission and lead off with a few opening remarks and then to take questions from the committee. Before I do so, it may have been that you were not present this morning when I read out publicly the orders under which the committee is operating and, just for the sake of the record, those orders go to privilege. The evidence that you give will be protected by parliamentary privilege. The following statement does not relate to any one person appearing before us; it is a general statement: it is important for witnesses to be aware that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. If you have any matters that you wish to be given in private you should approach me or make a decision as to whether we hear it in private. If there are any remarks to be made which relate to a person which may be adverse, it is appropriate that they be given in camera; otherwise we will extend the opportunity to any such person named to have a right of reply. I do not think you are an officer of the Commonwealth.

Mr Ahern—No.

CHAIR—So the particular rules applying to officers of the Commonwealth do not apply in your case. I make those remarks not because I think they are necessary but so that you are aware of the general rules under which we operate. I now invite you to address us.

Mr Ahern—Thank you, Senator. I am presuming that the senators have read the submission so I am not going to waste your time walking through that verbatim or anywhere near that. If I could just open by saying that I am the DMO client manager for Tanner James. We are a private company operating out of Canberra. We specialise in project management and, in particular, in a method called Prince2—a method on which the DMO's PMM, project management method, is based. I am here today to try to add value to this inquiry from the point of view of bringing independent advice on what has gone right and what has gone wrong in DMO within projects from a project management perspective. I stress that: there are many other aspects of what can go right and wrong with projects, talking purely about project management in this context.

I will give a quick run through our history. Tanner James has been in existence now for about seven or eight years. We led the introduction of this method called Prince2 into Australia from the UK. It is a best practice public domain project management method. We are the biggest consulting group in Prince2 in the country and we have had very many successes with many clients throughout Australia.

I would stress that I am very much not here to sledge Defence. I do not subscribe to the view that everything that Defence has ever done is bad, as you might read in the press from time to time, and I would like to put on that, if I can, limits on my advice. Obviously there are some projects that we have not been involved with that I will be unable to comment on.

At the moment there is another factor that needs to come into this, and what I say I guess to some degree is that there is a tender on the streets at the moment for provision of Prince2

services to the DMO. For that reason, if I seem at all cagey on anything commercial, I am aware of the sensitivities of talking too much about who is good and who is bad in Prince2 throughout the country, for example, so I will try to be very careful about that.

Senator HOGG—Could I just stop you there for a moment. Are you the only people with the licence to Prince2 or is it something that is commonly available?

Mr Ahern—No, absolutely not. It is in the public domain. You must be an accredited training organisation to train in Prince2. You must be an accredited consultant to consult in Prince2. You do not necessarily need to be an accredited person or practitioner to run a project using Prince2 or any derivative thereof.

Senator HOGG—And do you have the licence to vary Prince2?

Mr Ahern—Prince2 is designed—and one of the first things it actually says in the Prince2 manual, which is a rather thick book—

Senator HOGG—I have not read that.

Mr Ahern—No, I would have expected that.

Senator HOGG—Not part of my bedtime reading.

Mr Ahern—You would need to set aside some time for that, and I do not expect you ever will have the need. One of the very early things it says in the manual is that Prince2 must be tailored to suit an organisation and it must also be tailored to suit individual projects. You do not need a licence to do that. Where you do need a licence is if you are saying that you are consulting. You must be accredited to do so. I think that would probably suffice for opening comments. I do not want to bore you too far.

CHAIR—You are not boring us. We are delighted to have you here with the opportunity to talk to us.

Mr Ahern—Thank you.

Senator CHRIS EVANS—Mr Ahern, I have read the submission. Could you just go through for me what Prince2 does in a non-technical way, though—what you say you do for project management under this system that they did not do before. I do not want the technical jargon. What is the outcome as a result of using that system?

Mr Ahern—I will try to give you a quick three-minute corridor briefing.

Senator CHRIS EVANS—I wanted a sort of easy summation of what you say you do.

Mr Ahern—Prince2 is a structured project management method. The idea is that it provides a road map. It includes eight sets of theory and eight main processes that should be undertaken when conducting a project. The processes are designed to guide project managers of varying

experience levels through a project to make sure that you do the fundamental things in project management and do them right, so it guides you through.

I will take you through the processes: to start a project effectively you should understand the scope and the overall costs before launching into it. You then clarify that, in what is called 'initiating the project', and set out a properly worked plan for how you are going to implement the project. There is an iterative area in the middle, which is about controlling your stage, controlling what is actually being produced under the project and reporting problems, including good news. Controlling teams such as contractors and the like is another one of the processes.

Prince2 works if you take the project in chunks, particularly for many big Defence projects, and manage that chunk. At the end of that you review where you are up to, check that your business case, your reasons for being are still valid, and replan the next chunk of work, to put it in absolute layman's terms.

When you come to the end of the project, Prince proposes quite a structured way of closing a project, transitioning to operational use, ensuring that everybody is satisfied with the end outcome, doing some of the very simple things, like archiving files, reporting the end of the project and letting everybody know that it is over.

Senator CHRIS EVANS—It is effectively a methodology, is it?

Mr Ahern—Yes.

Senator CHRIS EVANS—Prince2 does not actually manage it or if you are the company you do not have any hands-on experience. You just teach people how to use the system to hopefully deliver better outcomes. Is that fair?

Mr Ahern—We do both, actually. We do teach, and in our consulting role we tend to get very hands-on with the projects, and we actually help them plan out their project.

Senator CHRIS EVANS—The point I was going to go to is this: none of that overcomes problems for instance that the audit office was talking to us about today, that your systems rely on you getting good information, audited assessments, et cetera. If the information or the knowledge base is poor or there is no clarity about that, then your system is not going to solve that problem for them, is it?

Mr Ahern—It depends on what level you talk about. Within the project management side of things, there are pieces of information if you set up your plan properly and you control that plan properly—and Prince is very strong on a product based approach—you should be able to see what is planned to be delivered, how much that is going to cost, when it is due to be delivered and who is responsible for it. Prince gives you the capability to monitor and control the delivery of those things, so the information that is coming out of that—this is the beauty of a product based approach—is that it is very easy to say to somebody, 'I've been very busy this week. I've spent two weeks working on something.'

But Prince2 says, 'If you spent two weeks working on it and it was meant to take two weeks, I should see it by now. Is it here? Can I put my hands on that product and check that it is here?'

So you should be getting information at that base level out of the project to know how you are going. At that level, yes, it can very much help with the information systems. The important thing then is to hook that information into your corporate reporting framework. I hope I have not lost you on the technical side.

Senator JOHNSTON—Mr Ahern, if I ask you a question which you think encroaches upon your tendering process, and I certainly do not want to do that, please feel free to decline to answer. You have a commercial relationship with the DMO.

Mr Ahern—Yes.

Senator JOHNSTON—It is a contractual relationship.

Mr Ahern—Yes, it is.

Senator JOHNSTON—And who drew the contract for Tanner James?

Mr Ahern—The then head of Aerospace Systems, Air Vice Marshal Ray Conroy.

Senator JOHNSTON—How is that contract working in terms of its level of adaptability, appropriate terms and conditions. Generally does the contract meet your day-to-day requirements in order to interact properly with your client?

Mr Ahern—Yes, I believe it does. It is a little narrow in application.

Senator JOHNSTON—So you are doing more work beyond the terms of the contract?

Mr Ahern—I could easily be doing more work beyond the terms of the contract. There are limitations on what I can contractually do. However, that said, Aerospace Systems Division tends to be very flexible in its approach and to be very accommodating where there has been a need to do something else beyond that—and do it in a controlled way.

Senator JOHNSTON—I note that Aerospace Systems are the predominant area of your focus within the DMO.

Mr Ahern—It is at the moment, yes.

Senator JOHNSTON—You do not have a wider contractual relationship to provide your planning methodology to, for instance, Navy and/or other operations?

Mr Ahern—There is a standing offer in place, I believe. I may need to check this on notice, if I might. If I am wrong, I could come back, but I do believe that there is a standing offer in place with Maritime Systems Division. I do not believe that that has actually been exercised in the recent past, and by that I mean the last few months.

Senator JOHNSTON—So you assist and facilitate the management of the projects. Is that an accurate description?

Mr Ahern—Yes.

Senator JOHNSTON—These are predominantly in the Aerospace section.

Mr Ahern—That is correct, yes.

Senator JOHNSTON—Can you give me a rough idea of the gross value of each of those projects? I do not want to know what they are, but what sort of dollars are we talking about?

Mr Ahern—Take Air 6000 out of the equation. It pollutes the figures somewhat because it is so big. I would say the rest between them would probably amount to maybe \$10 billion to \$15 billion.

Senator JOHNSTON—About \$10 billion to \$15 billion?

Mr Ahern—Thereabouts.

Senator JOHNSTON—How long has your contract been on foot?

Mr Ahern—Within Aerospace Systems, I have been there personally for three years. We have been assisting them now for four to 4½ years.

Senator JOHNSTON—Do you know what was in existence for project management methodology prior to Prince2? I am taking it that you are Prince2 and no-one else has delivered the product.

Mr Ahern—Not in Aerospace they have not. It predominantly relied on a set of manuals, as I understand it, called the Capital Equipment Procurement Manuals or CEPMAN for short. That was a combination of some project management, but it was predominantly about acquisition management—that is, how you go about defining what you are going to buy and what the right path for acquisition is; not so much detail about how that path is managed. It is one thing to lay out a path for acquisition; it is another thing to actually manage that path.

Senator JOHNSTON—Do you know why there is a preference in Defence for Prince2?

Mr Ahern—To put it shortly, I believe because it is demonstrated that it can work when instituted properly.

Senator JOHNSTON—Are you talking about the United Kingdom experience in Defence?

Mr Ahern—No, I think it was more a case in Australia of where some projects took it on and managed to get themselves either out of problems or get themselves set up properly, or used elements of the method—perhaps in some cases not all of the method—and felt they had made significant gains out of so doing. From there, both division heads within the Defence Materiel Organisation—or as it was the Defence Acquisition Organisation—and also, very importantly, chiefs and vice-chiefs of the forces who have seen these projects have said, ‘Hey, I’m happy to

be seeing what I'm seeing coming out of this project. I'm happy with where it's going. I'd like you to do that with all of your projects.'

Senator JOHNSTON—Can you give me a rough percentage of projects that are going well as opposed to the comparison of the rough percentage of the projects you have a bit of a question mark over? I will not take it any further than just a bit of a question mark.

Mr Ahern—That is a difficult question to answer for a couple of reasons: one of them is that we do not get visibility of projects that we have nothing to do with. So those projects which have never attempted to use Prince—

Senator JOHNSTON—I am talking about your Prince projects.

Mr Ahern—Of the projects that I am working with personally—I will take it from a couple of angles if I can—about 50 per cent to 60 per cent have actually implemented Prince with some reasonable effectiveness—that is, PMM, which is the derivative of Prince, with some reasonable effectiveness. I would say that about 20 per cent to 30 per cent of those projects have implemented it with real commitment, taken this method on, tried to make it work and, when they have hit a snag, tried to fix it and continued driving that way.

Senator JOHNSTON—Is it fair to say that the snags relate to the accommodation of a parallel development of technology, along with the project—do you follow what I mean?—like JORN, for instance? Do you know anything about JORN?

Mr Ahern—I do not know anything about JORN.

Senator CHRIS EVANS—Neither do a couple of people running the project.

Senator JOHNSTON—Where a project commences and the technology is going to be interfaced along the path of the objective, the road to the objective, how does Prince2 accommodate that and also a change in design specification?

Mr Ahern—Prince2 acknowledges, firstly, that there is much more to managing a successful project than simply checking the time lines every day. You must go into things like systems engineering and the like to build designs in many more complex projects. Prince2 says that if you have a snag with something like that, you should raise it as an issue, deal with it as an issue, adjust your plans appropriately with the right agreement at the right levels and if that means going beyond what is called the project board, which is the governing body in Prince2, and ratifying changes with higher bodies, then so doing.

What I tend to find often is that where we hit a snag like that—let us say a contractor cannot deliver a piece of software, for example—the project focus goes away from managing the project right on to that issue. They treat that issue and then say, 'Oh, now, we've got to get back on with managing our project,' whereas to me that is all part of managing a project. You should be looking at the impacts on your schedule as you see these things and that should be a core thing which you are discussing and considering when you are dealing with the issue. What impact does this have on our schedule; can we live with it?—those sorts of considerations.

Senator JOHNSTON—How many Canberra based consultancy firms, such as yourself, deliver your product?

Mr Ahern—I believe there are three here at the moment.

Senator JOHNSTON—Three competitors?

Mr Ahern—Two competitors. Us, plus—

Senator JOHNSTON—So there are three of you?

Mr Ahern—Yes.

Senator JOHNSTON—What about Australia-wide?

Mr Ahern—I am guessing a little. I think we are up around 10 to 15.

Senator JOHNSTON—Can you give us a little bit of background into what projects outside the DMO that Tanner James have successfully managed?

Mr Ahern—‘Successfully consulted’ would probably be a better way of putting it. It is difficult to name projects in some cases. We are being very successful with NRMA, one of our clients, at the moment; they are doing very well. We work with the Defence Housing Authority, which is hardly too far outside Defence, I guess. We are having some significant wins in there at the moment. IP Australia, an intellectual property organisation, have been our clients for some time. I did bring along an article here about the Health Insurance Commission. I do not know if you get to read the *Canberra Times* at all, but there was an article in there on what success they were having with Prince2. I would be quite happy to table that article.

Senator JOHNSTON—So you have a predominantly commercial focus.

Mr Ahern—Probably fifty-fifty. We are about fifty-fifty Public Service/commercial.

Senator JOHNSTON—What about the DMO? What percentage overall would that be of the 50?

Mr Ahern—Three years ago I would have said it was 70 per cent of our total business. Now it is about five or 10 per cent—thereabouts. It is an important client to us—as all clients are, of course, just in case any of them are watching in particular.

CHAIR—We always knew that.

Mr Ahern—Yes.

Senator JOHNSTON—What is the approximate number of people involved in the management of these various projects that you have been involved in inside Defence?

Mr Ahern—How many people have I consulted with? Is that the question?

Senator JOHNSTON—On one project, roughly how many people come together from the client's perspective to handle the project?

Mr Ahern—It varies from project to project. It ranges between one or two in some cases. Some very large projects have only one or two people, I might add. A typical project has 10 or thereabouts in a group. Some of the larger ones—Air 87, for example—are up around 40 people. Hornet upgrade would probably be a similar sort of number.

Senator JOHNSTON—How long would you spend at the front end plotting out your Prince2 methodology, on average?

Mr Ahern—In many cases, not long enough.

Senator JOHNSTON—Why is that?

Mr Ahern—Urgency. Everybody wants to get on with things now. I was reminded of something Abraham Lincoln said, 'If I was given eight hours to chop down a tree, I'd spend the first six hours sharpening my axe.' I do not believe that is always given appropriate priority: the sharpening of the axe is not always given appropriate priority. There are pressures from stakeholder groups, government and the like to get on and deliver something, 'Give us a contract; give us a specification.' Sometimes it can be too rushed.

Senator JOHNSTON—How do those numbers of people involved in the various projects compare to the private sector?

Mr Ahern—Typically, quite small.

Senator JOHNSTON—The private sector is bigger? More intense?

Mr Ahern—Yes. The private sector, certainly up-front in that planning time, tends to put more people into the planning and sometimes fewer people into the managing. That said, the long-term managing is generally much more complex in Defence.

Senator JOHNSTON—Is there a continuity issue there in comparison—the private entity with the person who sees the project through as opposed to this? I do not want to put words in your mouth, but is there an issue there?

Mr Ahern—That is a very big issue. A typical Defence project—anything from five years through to 15 or 20 years—is quite a reasonable, normal project. With a defence posting cycle of every two years and most project managers being Defence personnel, while sometimes they do not always turnover on those two-year frequencies, that can mean you have seven or eight project managers throughout the life of a project. If the documentation is not 100 per cent up to scratch when that new project manager hits the deck, you can be looking at three to six months to really get that person up to speed, and that can create major issues.

Senator JOHNSTON—Sorry, Mr Chairman, to keep asking all these questions, but it is a fairly interesting area.

CHAIR—You have the call.

Senator JOHNSTON—I am aware of BS1079—something like that—the British standard, professional project management system. Are you aware of other systems?

Mr Ahern—I am aware of some other systems.

Senator JOHNSTON—There are not many around. Tell me which ones you are aware of and why you think Prince is better than those.

Mr Ahern—The main two that I come across are Project Management Body of Knowledge—PMBOK—which has a system built into it, and Prince2. They are the main two pure project management systems. There are plenty more systems that can tack onto either of those—things like earned value management, systems engineering and the like—but they are not purely project management systems. I am fairly knowledgeable in both PMBOK and Prince2 and, frankly, while there are some differences between the two, there are very few incompatibilities, and I draw knowledge and consulting from both sides of the house. I will quite happily use a PMBOK type work breakdown structure in a Prince environment.

To answer the second part of your question—why do I think Prince is the better of those?—the beauty about Prince is that somebody with not necessarily a huge amount of project management knowledge can pick up the Prince manual and work their way through it; they have a guide for how to go through there. PMBOK tends to be more competency based and works on the assumption that you will spend quite some time getting up to speed in some of the much more complex elements of project management. It is a good concept, but it takes time and most of the organisations I work with simply do not have that time before people move on. The average time people stay in a job these days is down around one or two years. It is pretty hard to train people up in those sorts of competencies and keep them in an organisation.

CHAIR—I have two questions. I want to ask this in the context of the Air 6000 project, which is a huge project and one about which has had some newspaper reporting of delays. Just before lunch, Mr Gary Brown, one of the witnesses, argued that it is usually decisions made early in a project that three years down the track may send it off the rails, if they are not made properly. How do you minimise making wrong decisions early, when their effects may not manifest themselves until some time later? What control mechanisms do you have?

Mr Ahern—Air 6000, I believe, is a program. It is not one project. It will be many separate projects, in all likelihood. I believe that definition of the program—that is, almost a feasibility study—should be managed as a separate project. I understand the concept of whole-of-life thinking and I have addressed that in the submission, but I believe that that early phase needs to be managed from the first time somebody thinks, ‘Gee, we need some new aircraft, helicopters or whatever,’ through to the point where you have actually made a decision, and it is that decision that should be the end product of your first project.

If you actually specify what needs to be done to get through to that decision, then you are going to be much better off in the long run. Yes, you can put a manual together, and the retiring Vice Chief of the Defence Forces had a key hand in creating a capability life cycle model—and that is terrific—but over the top of that you need project management discipline to actually make sure that those things happen, to make sure that they are adequately resourced and to assign some quality criteria to some of those things as you go through.

For example, if you are doing an operational concept document, describe what it is you are doing, make sure it is properly resourced, make sure that all the studies that build into that actually do build into that and, when the operational concept document is produced, it should be a far better quality product and should support better decisions. At the moment, there are some big projects that are doing that. I am doing quite a bit of work with Air 9000, for example, and they are doing quite a lot of thinking about what these things need to be.

CHAIR—Mr Brown also argued that in Defence there is a bit of a psychology problem or a culture that needs to be changed, one of the elements of which is that when things go wrong—when there is a blow-out in costs or whatever—psychology takes root: ‘We can fix this.’ Rather than own up to it and deal with it, there is the psychology: ‘Let’s just work a bit longer, keep it quiet and, by the time we get through the project, we’ll have fixed it and no-one need be disturbed or worried.’ There is that type of attitude. Have you encountered that sort of approach?

Mr Ahern—I feel very uncomfortable commenting on people’s psychology in the organisation, but I would say that I have come across projects that had unrealistic budgets and had not—

CHAIR—Unrealistically small budgets?

Mr Ahern—Unrealistically small budgets. I have come across cases, for example, where simple mathematics will tell you that much money will not buy 15 aircraft. That is purely fictitious.

CHAIR—I understand.

Mr Ahern—Don’t go looking for a project with 15 aircraft.

Senator HOGG—I am looking on the web now!

CHAIR—You are just illustrating your point. I understand what you are saying.

Mr Ahern—With 15 aircraft, at \$20 million each, we have \$300 million to go. I have seen projects with that sort of budget. It sounds fine until you say, ‘Well, how do you support this? What sorts of missiles do we need to go with this? What sort of adaptation to that aircraft do we need? There are the 10 elements of logistics support, for example, that are not catered for in budgets.

There is one thing that I do claim has very strong success with several projects. A method like Prince will get you to a point and then say, ‘Hang on. You don’t have a budget. You don’t have

a business case. You can't deliver that piece of equipment for that price.' You still rely on personalities—of course you rely on people to do the right things—but, if everybody does the right things throughout that chain, Prince is much more likely to bring such a problem to the attention of those people higher up in the chain who, hopefully, can pass on the warning lights. We have had quite a few projects that have come in and hit exactly that problem, gone around the buoy, and either had their scope reduced. I will not name names, but there are a couple of projects I could quote that have had their scope reduced or had their budget increased to something more realistic.

CHAIR—It is too soon to say what we do about this, but one of the things that is kicking around in the mind of the committee is an idea that maybe a parliamentary oversight committee, in which some of these things have to be justified, would provide the necessary discipline and transparency. Do you have a comment on that?

Mr Ahern—My comment would be that you would have to be very careful doing such a thing. To do such a thing, you would have to have in place very transparent control mechanisms at the ground level—that is, you would need to be able to verify it. My question is: how would a government committee be able to look into a project and know what is going on on the ground—know whether in fact things have been delivered or not? My suggested answer is that, if you had a control mechanism that identified what was to be delivered that you could actually touch and feel, and a proper schedule throughout the project, such a committee may be able to get some of the key information out of that schedule and the controls that go with it and react to that.

A much more difficult thing for such a committee to see would be a situation where, for example, the money was tracking just fine—everything was tracking very nicely—but, in the project manager's head or in the branch head's head, there is a 'we can't do this' knowledge. They know they cannot, but it is not tracking through in your project management matrix just yet. That would be a much harder thing to control, and I suspect from your earlier question that that is what you would be hoping to control.

Senator JOHNSTON—Even with Prince involved?

Mr Ahern—What Prince does is put a project board much closer to the action. The people on a project board should be able to get visibility into the project and should know what is going on on the ground. Also, by having user representation in particular but also supplier representation on a proper project board, you have much more chance of the devil's advocate coming forward—that is, somebody from the user community saying, 'You're not going to be able to deliver me that.' Once they see the facts, with the budgets, they can say, 'You can't do that. You can't deliver that.' If you can get that at that ground level and you can get honesty in reports that are coming from those project boards up to higher committees, and ultimately perhaps to a government committee, you have some chance of making the decisions at the higher level that you need.

CHAIR—You mentioned what I took to be a sort of syndrome that some projects have unrealistic budgets—that is, the budgets are stated too low and, later on in the project, supplementation has to occur. I am trying to get a sense of proportion about this. How common is that?

Mr Ahern—I would say it is becoming less common with the use of integrated project teams and the like across DMO and Capability Systems. The jargon used to go something along the lines of ‘the dead cat coming over the fence from Capability Systems into DMO’. That was a common term around Defence.

CHAIR—The dead cat being?

Mr Ahern—The dead cat being a project that was supposed to be revived by DMO when the budgets were unrealistic and the capability was not well defined. I believe that that is becoming less and less common. I have some confidence in some of the budgets that I see coming out now, particularly out of these ones where there is an integrated project team in place. When I first arrived three years ago in Aerospace Systems, it seemed that with almost every project that I dealt with, I would go in and talk to the project manager, who would say, ‘I don’t know what I’m doing here. I can’t do this.’ A lot of those problems are being resolved. That is why I am deliberately not sledging DMO. To DMO’s credit, they have become a lot tougher on that.

Senator CHRIS EVANS—It is a case of bid low, get approved and then deal with it. One of the problems for governments is that, once the project has been approved, if the budget goes from \$200 million to \$400 million, what do you do? You have spent \$100 million when you find out. What do you do? Waste the \$100 million and close it down, as the US has on occasion? Do most governments and ministers end up saying, ‘Oh, well, in for a penny, in for a pound,’ and, because we need the capability, we just pay the \$400 million? I suspect successive Defence ministers of both persuasions would say they got caught like that, and I suspect Robert Hill is going through it at the moment. How do you solve that? Is that a cultural change as well?

Mr Ahern—I feel that if I were to agree with that I would be somehow suggesting that that might be a deliberate action by Defence. To be quite honest with you, I do not believe there is a deliberate conspiracy in that way, but I do not feel that I could comment further as to whether it is a deliberate thing.

CHAIR—It sounds a bit like what the Prime Minister of Luxembourg complained of the other day. He said the European Union governs by putting out a general statement of principle which everyone approves, then follows it up with a hugely complex detailed set of implementation instructions which confuse the hell out of everyone. By the time they get to the point of realising what it truly involves, they are too far down the track to reverse and scuttle it.

Mr Ahern—It sounds like the United Nations!

CHAIR—It sounds like bureaucracy out of control.

Senator CHRIS EVANS—I want to follow up one of the things that you said earlier. You referred to your Abraham Lincoln story about the value of preparation et cetera. How does that theory or principle of early preparation, investment in the early stages of the project, planning what it is you are trying to buy and how you will go about it fit with the new DMO mantra of short time frames for drawing up of contracts and awarding of contracts? As I understand it, the pressure is on to be seen to be lean, mean and efficient by getting things done quickly and cutting down what were rightly regarded as excessive lead times, forever reviewing and analysing, and, by the time they got around to wanting to buy the thing, there was a new product

on the market that had superseded that one. It seems to me you have contradictory pressures there. How is that getting resolved?

Mr Ahern—I believe DMO are doing a very good job of that. Look at the way Air 87, for example, moved through to contract. It seemed to move through very well. I believe if you manage that part of a project just as much as you manage the delivery of the goodies in the middle of the project, there are areas—and DMO have proved it—where you can trim excessive bureaucracy off those processes. That does not necessarily mean that the thinking that goes into the project is any worse. It just means that it is more controlled, more thought about and quicker. Once that thinking has been done, it gets signed off and goes out to tender. I would think that there are probably quite a lot of potential areas of improvement remaining there for other projects, as well as Air 87, to go through and get to contract quicker.

Senator CHRIS EVANS—Are you managing Air 87 and the Prince2 system?

Mr Ahern—It is one that we were involved with early, and the project manager there is quite up to speed with Prince2. I have trained a lot of people out of Air 87 but I must then qualify that by saying that, because he is so good at what he does, I do not really get much visibility of the project any more.

Senator CHRIS EVANS—That was not so much a personal question. I will phrase it correctly. Is Defence using Prince2 in the management of Air 87?

Mr Ahern—Yes, I believe it is. I have to qualify that by saying I have not been within 100 yards of that office for probably five or six months.

Senator CHRIS EVANS—I do not understand. I am getting a bit confused. I thought they basically contracted to use the system and we now get the sense that it is only, it seems, in certain sections of DMO—Aerospace sorts of areas—but now it is not in all of Aerospace. I seem to have the wrong end of the stick on this, I suspect.

Mr Ahern—Let me go back just a tad. I am contracted into Aerospace Systems Division. Aerospace Systems has 30-something projects. I was told the exact number last week but I have forgotten. There is only one of me in there, and I tend to try to transfer my knowledge into these projects and set them up, get them going in the right direction and get them up to a level where they can run the project in their own way. I would say probably 25 out of the 30 projects in Aerospace—and that is only an approximate number—are using Prince2 in some way.

Senator CHRIS EVANS—It isn't mandated that they use it, having contracted you in?

Mr Ahern—It is mandated.

Senator CHRIS EVANS—But that is sometimes mandated in the breach?

Mr Ahern—There are some projects that have been legitimately excused from going down that path because they were so far into contract, but there are some projects that have just not gone that way.

Senator CHRIS EVANS—I am not trying to catch you, Mr Ahern. I am not trying to be clever. I am just trying to understand what is happening. Have Aerospace said, 'We're going to use it on all new projects,' for instance?

Mr Ahern—Yes, they have.

Senator CHRIS EVANS—So there will be older projects that would not be using it, fair enough. I am trying to get a sense of whether Aerospace are saying to project managers now, 'You must use Prince2 and we'll hold you accountable for that.' I sensed, from what you said a minute ago, that the project manager could choose the extent to which they did or did not. I am trying to understand where the line is.

Mr Ahern—To answer that, I think I will have to take you through a little bit of the history. Air combat systems have been probably the primary drivers of Prince2 within Aerospace Systems Division. Air Combat Support Systems, as it used to be—it has now changed its name—was very much into using Prince2. The rotary wing area, which used to be called 'helicopters and guided weapons', did not use it for many of their projects. Then along came Air 87, a new project within the division, and it was mandated that it must go down that path. A lot of the rotary wing projects were already well and truly in a contract and the division head at the time made a conscious decision that they would not go that way.

Senator CHRIS EVANS—I understand that, and that has been helpful. However, I do want to be clear. This may not be your responsibility and, if it is not, I am happy to excuse you for not answering it. Does that mean that the project manager of Air 87 is required to use Prince2, is that mandated of them and is someone in charge of ensuring that they are following that system?

Mr Ahern—In answer to the first part of the question, I believe it is the case that that project manager has been told to use Prince2. I believe that is the case.

Senator CHRIS EVANS—I will ask DMO to clarify that for me.

Mr Ahern—It may well be worth checking. Is there anybody actually checking on that? They do have an audit function in there, but it is divided over a wide range of tasks. No, there is not specifically a person sitting within the division, controlling the usage or otherwise of Prince2. It is basically left up to me to talk to branch heads, division heads and the like and let them know where I think there are any weaknesses.

Senator CHRIS EVANS—It is more that you are trying to introduce the systems and the practices rather than, 'We have adopted this process and it shall be followed.'

Mr Ahern—Yes. I am trying to introduce the thinking that is necessary behind the method. One of the shining examples of a project that did brilliantly using Prince2 got a kick in the pants for not following our process by not having the right documents in place. I will name it—lead-in fighter 5367. They did a wonderful job implementing it but did not follow a couple of the processes perfectly. I have no trouble with that sort of implementation. I do not go around checking to make sure that everybody has a project plan, a business case, a stage plan—that sort of thing. I try to make sure that they are working in a certain way.

Senator CHRIS EVANS—I am not trying to be difficult. From my point of view, Prince2 is held out as a suggestion that this would allow for better outcomes—better management of the projects.

Mr Ahern—Yes.

Senator CHRIS EVANS—I want to be able to test that. What I am sensing now is that I am not sure whether I can say, ‘Air 87 project will be managed under Prince2.’ Can I compare them with other projects to decide whether this is actually adding value; whether your sales pitch—without being rude—is right or whether there is no sign that it is making any difference? Quite frankly, from what you have told me now, I am not sure how I am going to be able to measure Prince2 and your performance. You are not accountable to me, but do you know what I mean? At the moment I am not able to be clear on where the differences are, what projects are being managed under this system, and whether or not we can then test outcomes.

Mr Ahern—Yes. I have made consistent recommendations that we do have a central organisation of some sort that is responsible for making sure that certain things happen, for ways of thinking to happen and for measuring the actual success in monetary terms—in schedule terms and that sort of thing. I am very confident that, if you measured the projects in Aerospace Space Systems Division that have used Prince2 against those that have not used Prince2, I can say that none of the famed failures are Prince2 projects. I can say that much.

Senator JOHNSTON—Could you say that again?

Mr Ahern—None of the famed failures around DMO, that I am aware of, are Prince2 projects. I am quite confident in saying that.

Senator CHRIS EVANS—But, on your earlier evidence, we will not know for a while yet whether they are—

Mr Ahern—That is exactly right. For anything to really cut in at Defence, it is going to take years. As I said in my submission, the expectation that two years later you are going to fix every project in Defence is just completely unrealistic.

Senator CHRIS EVANS—Thank you for that.

ACTING CHAIR (Senator Hogg)—I have a couple of questions. An earlier witness today, Mr Brown, suggested that it may not be appropriate to apply a single project management model—for example, Prince2—to all projects, because projects vary greatly. You say Prince2 must be tailored. Presumably you think that this tailoring gives Prince2 the necessary flexibility.

Mr Ahern—I do, but I would also disagree with part of Mr Brown’s comment there. I would think there are consistent things you want out of every project, regardless of what that project is. You must know how much this project will cost, what the scope of this project is and how long it will take to deliver. You must be able to put forward a legitimate, reasonable schedule that can be tested and proven. Regardless of the project, you must have ways of allocating work and getting signed-off work back. You must have a legitimate way of closing off the project and determining whether you have delivered what you were meant to deliver. Those are the

fundamentals that Prince2 talks about. The whole concept of Prince2 is about making sure those simple things are done and done right.

It certainly is the case that, for a project as complex as your typical Defence projects, there will be additional things that you need to do as part of that project management. Those fundamentals in Prince2, I believe, are absolutely mandatory for every project. You must be able to know those basic things I just spoke about then.

ACTING CHAIR—Let me just take you back. Whilst you may not have been around, you might be able to advise the committee. Prince2's forerunner was Prince, and DMO's forerunner was Acquisitions. Did Defence Acquisition use the old Prince system?

Mr Ahern—Only for a few projects. There was only a handful. My current managing director and director in DMO were helping out a few projects with Prince. I am just trying to think what its title was back then. Essentially, though, the organisation that ran Army Minor Projects—I think it was part of joint logistics—did use Prince for army minor projects fairly effectively, as I understand it. I was not personally involved. But it was about 1998 or thereabouts that Prince2 started to take off in DMO and DAO.

ACTING CHAIR—Let me go to your submission, where you try to give us some statistics under terms of reference 2B.

Mr Ahern—Yes.

ACTING CHAIR—Under 'Comments' in the second paragraph—and these were statistics admittedly in August 2000—you say that 36 per cent of projects had converted well to PMM.

Mr Ahern—Yes.

ACTING CHAIR—However, only nine per cent of the projects were deemed to be controlling well.

Mr Ahern—Yes.

ACTING CHAIR—I took it from the evidence you have given us today, where you said there was 50 per cent to 60 per cent reasonable effectiveness in the projects that are using Prince2—is that correct?—but there were only 20 per cent to 30 per cent of those with real commitment.

Mr Ahern—Those figures were within Aerospace Systems. It is one of four divisions.

ACTING CHAIR—These figures were across Defence, were they?

Mr Ahern—These figures here were across the old DAO at that time. I think it may have just changed to become DMO at that stage. I am not quite sure when that was.

Senator JOHNSTON—That was 2000.

Mr Ahern—It was 2000.

ACTING CHAIR—Yes. Do you have any idea of what the up-to-date figures would be for Defence?

Mr Ahern—As the implementation of Prince2 PMM is no longer managed centrally, I am not aware of any collection of statistics or health checks on DMO projects in toto.

ACTING CHAIR—It seems to me, from those statistics, that one-quarter of the projects were deemed to be controlling well at that stage. Whilst the culture has changed, it would seem to me that if we can get some reasonably up-to-date figures on this we will see the effectiveness of the change of DMO coming out of the Prince2 system—whether it is working effectively. Is that a reasonable assumption? I am not trying to get rocket science here; I am just trying to get some method by which we can gauge what is happening without being overly prescriptive about it.

Mr Ahern—Absolutely. There are a lot of confounding factors in there. If you went now and looked at all those projects that had converted to Prince—and by ‘converted’ we mean set themselves up with plans, proper schedules, proper quality expectations and that sort of thing, which is what that ‘converted’ means—you may well find a lot of old projects which did that three or four years ago and have not touched it since. I do not think you would find that in Aerospace Systems, but you may well find that in other projects. As I am not in there, I do not really know for sure. Those statistics may or may not be valuable.

ACTING CHAIR—So you would have other people from your organisation who would be dealing with the other parts of Defence?

Mr Ahern—In the normal course of events we would, but the only work we have been doing with DMO over the last two years has been with Aerospace Systems, and Maritime Systems to a much lesser degree.

ACTING CHAIR—Is that because the other parts of Defence do not want you? Or are they contracted out to one of your competitors?

Mr Ahern—A bit of a mixture of those things. There are one or two divisions that are not using Prince at all. There is one division that one of our former business partners, who is now a competitor, is largely servicing.

ACTING CHAIR—But one would expect that, under the umbrella of DMO, they would have a blanket ruling, if we can put it that way—that people would use Prince2 from hereon, obviously. Would you know of that?

Mr Ahern—No, there is no such ruling as far as I am aware.

ACTING CHAIR—Under 2C you made reference in your submission to the fact that some project boards have been incorrectly constituted, leaving out user representation altogether.

Mr Ahern—Yes.

ACTING CHAIR—You say others have been created but never actually sat in a PMM context. You go on to say, ‘That is, the boards may have met to discuss particular issues but have never considered the plans for the project.’ You say, ‘Far from increasing the confidence of the organisation, boards acting in this way have the potential to detract from that confidence in the project and in PMM itself.’

Mr Ahern—Yes, that is correct.

ACTING CHAIR—How often do you find that happening now, as opposed to previously?

Mr Ahern—A lot less, because there are a lot fewer boards pretending to sit as boards. Those projects which actually want to use PMM are using it and tending to use it more effectively. I still do see examples of boards that do not have the right people on them. This ties into that matter we discussed earlier, where the issue distracts the project from the sense of control over the project management side of things. Quite often when I am talking about that, these boards—which were not really boards anyway—tended to just consider the latest issue, be it technical, be it political or whatever. I see that happening a lot less these days.

ACTING CHAIR—On that note we will have to stop. I thank you, Mr Ahern, on behalf of the committee, for the evidence that you have given us today and for the very full submission you put to the committee.

Mr Ahern—My pleasure.

ACTING CHAIR—Thank you very much.

[2.40 p.m.]

BORGU, Mr Aldo Antony, Program Manager, Operations and Capability, Australian Strategic Policy Institute Pty Ltd

THOMSON, Dr Mark John, Program Manager, Budget and Management, Australian Strategic Policy Institute Pty Ltd

WHITE, Mr Hugh John, Director, Australian Strategic Policy Institute Pty Ltd

ACTING CHAIR—I welcome witnesses from the Australian Strategic Policy Institute. I think you are familiar with the processes of the Senate committee, so I will not take time going through it. If there is any evidence that you may wish to give privately, the committee will consider your request. Although there is no formal submission, I understand that you will be making a statement to the committee. Senator Cook apologises, but he has had to step out for a couple of minutes and I am acting as the chair.

Mr White—Thank you very much, Senator Hogg, for the opportunity to appear. This is ASPI's first appearance before a committee in this form. I must say it is a pleasure to be back behind this table in this new incarnation. Let me say one word about the Strategic Policy Institute itself: as I am sure you know, it has been established by the government as a government funded but independent strategic policy institute. Our aim is both to improve the range of policy options and ideas available to government and to inform and nurture the public debate.

ASPI is not in any sense an advocacy organisation, so the views we will be putting to you here are not the formal views of ASPI as an institute but rather our views as members of the staff. Mr Aldo Borgu is the program manager for the operations and capability program and Dr Mark Thomson is the program manager for the budget and management program, both of whom have a great deal of expertise on these issues.

I will begin by making a short statement addressing issues raised by your terms of reference, and I really want to address three. They essentially relate to what seems to me to be three big problems with challenges in the acquisition and materiel business. The first is getting what we want, the second is deciding what we want and the third is knowing what we are getting. On the issue of getting what we want: as your terms of reference make clear, there are some very significant reforms under way in the materiel organisation at the moment. That is clearly well overdue, but it is worth bearing in mind that the projects and the processes that DMO manage are exceptionally complex. Although it is no excuse for some of the problems that have been had, that complexity and the scale of complexity of the projects does need to be borne in mind.

I think the amalgamation of Acquisition and Logistics functions, which is at the very heart of the reform process they have under way at the moment, is unlikely to be a solution in itself to the problems in the acquisition and materiel areas, but it is potentially, if well managed, a good foundation, a good starting point for reform process. Obviously the creation of SPOs, the system programs office, looked like a good way to go about reaping the potential benefits that

ought to be derivable from an amalgamation of Acquisition and Logistics, but it will be—and it already is—a very complex and disruptive process. There is a question as to how well that process is being implemented and what it will deliver in the long run, but it is not a bad model to start with.

If you step back from those big structural issues that flow from the amalgamation and the establishment of the SPOs, there are obviously some very important processes and reforms under way within the materiel organisation on the way in which projects are managed and the sorts of processes they go through. Again, it is a very big process. The sorts of things that are being addressed, like alliance contracting, are worth doing but they are very complex to make work effectively. It is very critically dependent, in particular on the skills of the people involved.

That brings me on to the third area of the reform agenda, which is the way in which the skills of the people inside the organisation are being enhanced. That is very important. It seems to us there is some very significant progress being made, but it is worth bearing in mind that right at the heart of the issue is that the sorts of skills and performance that the government is expecting, and I think more broadly the community expects from the Defence Materiel Organisation, reflect a level of accountability and expertise which it is inherently hard to find and sustain in the Public Service, and in the public sector more broadly, within what you might call traditional Public Service career structures and remuneration structures.

In terms of getting what we want, I think the reform agenda is a promising one, but it is one with immense challenges and it is probably too early to reach a final conclusion as to what it will deliver and how well it is succeeding. I want to mention two other points, because I think they are almost equally important. One is the question of deciding what we want. There are all sorts of questions about how well DMO delivers what the government or what Defence organisation decides it needs, but a lot of the difficulties we have in delivering capability derive from difficulties we have in deciding what sort of capabilities we want.

These are partly issues that reside within the DMO itself, but they also reside in other parts of the Defence organisation. Often projects run into trouble because we do not know at the outset what we want. We do not specify it properly. We do not make cost capability trade-offs effectively. We seek Australian unique solutions where they are not required and are not cost-effective. A lot of those problems are tied up with two sets of issues: the first is the way in which the capability development works, the process works within what one might broadly and slightly anachronistically call the Defence headquarters; and the second is the way in which the relationship between the decisions made in Defence headquarters, and the implementation of those decisions in the materiel organisation, work. I think the interface between the capability development process and the materiel acquisition process is a very important one that perhaps needs further attention.

The third area is knowing what we are getting. One thing that strikes us at ASPI, particularly from our perspective on these issues, is that the level of transparency—the amount of information available to the public on the way in which major projects are being developed, the problems they are facing, the successes they are having, the issues and so on—is much lower than it could be. There are some effective models overseas, particularly the UK MOD, which publishes an annual survey with an update of the state of a range of major capability

development projects. We think this could serve as an effective model for much higher levels of transparency. I think that is good not just in terms of what you might call general public policy and public administration processes but because it would help to strengthen an environment of accountability and results orientation, which would be good for the organisation more broadly. I and my colleagues would be happy to expand on any of those points, or any other issues you would like to raise.

ACTING CHAIR—On that last issue, are you referring to the type of description that appears in the annual reports and the PBSs about the various projects? Is that basically saying there is far too little being said about an assessment of where the projects are at, where the changes are at and where the projects are going?

Mr White—Yes. I will ask Dr Thomson to comment on this a bit further, but we started focusing on this from our present new perspective when we were working on the ASPI guide to the Defence budget. We started looking at what sort of data we could put in the public domain to help people, in plain English, keep up to date with where some of the big projects were going. We looked at what was available in the PBSs from Defence and looked at what other information was available and looked around at what other countries did, and particularly this UK model. It looked to us as though other countries, otherwise quite like us, were doing a much better job of getting out into the public domain really useful informative data on these sorts of issues.

Dr Thomson—This came up in the context of putting together the Defence budget brief, as Mr White has said. We were very frustrated in not being able to access not expansive or detailed data but just the fundamentals, such as how large the cost overruns have been and how large the scheduled delays have been and, conversely, whether things are running ahead of schedule. We simply could not find that information. That is worrying for two reasons. The first is from an accountability point of view. We have \$2½ billion being spent per annum on major capital investment and there are nearly two or three pages in the PBS to outline forward plans for it, and maybe a dozen pages in the annual report, mainly in narrative form, looking back on it. The second reason why it is worrying is the answer to a question on notice from budget estimates this year. The question was asked, ‘Please tell us, for the projects in the capital program, how the schedule is going and how the cost is going.’ A response came back for the top 20 projects, but it also said, ‘We don’t have the resources to go through and generate this information for the remaining projects.’ The point is that sort of information should be readily available within Defence. Unless that information is constantly updated and visible to the people managing the program, they do not have the information at their hands—on the dashboard, so to speak—to allow them to manage and discharge their responsibility.

As was alluded to earlier, the Brits have looked at this problem. I have here—and I am happy to pass it across to the committee—a joint publication of the MOD Comptroller and the National Audit Office of the United Kingdom. They go through and look at only the top 20 approved projects and the top 10 yet to be approved projects, but they manage to devote 176 pages to those 30 projects. They do so in terms of very well predefined performance measures which they report against. Reading through the introduction here, it is very clear that this provides a useful management tool, both internally to the MOD and a useful reporting tool externally as well.

Senator JOHNSTON—Are you talking about money when you say top 20 or top 30?

Dr Thomson—Money, yes.

ACTING CHAIR—Mr Borgu, do you want to make an opening statement? I was not trying to quash any opening statements.

Mr Borgu—No, that is fine, Senator.

ACTING CHAIR—We will pass to questions.

Senator CHRIS EVANS—I would like to start with a couple of issues that we have been discussing with other witnesses today: firstly, the question of whether there is a culture or a mind-set of underbidding on the cost of projects and that the Defence department has an interest in representing the project to be of a certain value, knowing that capability changes or other issues will blow out the price of the project. It seems to me that successive ministers of different persuasions have been frustrated by thinking that they signed up for \$200 million worth on a project, and it ended up costing them \$400 million.

There seems to be this thing where neither Defence nor the bidders for the work have an interest in having a real cost because they both know that there is this sort of relationship where, later on, they will get down to what the real cost of the project is and the government will effectively have to pay. If we discuss this problem from the government's point of view, what do you do? You have spent \$100 million already on a \$200 million project. It goes to \$300 million, and you want the capability. You are a hostage to the whole process. One of the suggestions being put as a criticism has been that Defence has a bit of interest, and that has been undervalued as well because more projects are approved and the government has to deal with the consequences. I am wondering whether you have any perspectives on that and whether or not the DMO changes et cetera will assist with that. Or will governments continue to be hostage to what seems to be a constant escalation of the cost of projects?

Mr White—I think cost increases in projects happen in lots of different ways but in three that I will identify specifically. The first is blow-outs or expansions in the objectives of the project. This can happen at various stages through the approval process—for example, people decide they want to acquire a modest capability and then, as the project progresses, their objectives for the capability increase further and further. That is a very common trend. The second is circumstances in which a project, having been taken to contract, turns out to be more complicated than was recognised for some reason or other or, post contract, there is an expansion in objectives and you have to undertake what is, in effect, an engineering change proposal or scope of contract change. The third area is one in which the contractor simply fails to deliver for the agreed dollars—for the contracted dollars—the capability that was specified.

It seems to me that, of those three, the last one is in some ways the least serious source of overruns. It does happen, but I think the much more serious sources of overruns are in the first two categories—that either before or after contract Defence changes its mind about what it wants. It is a very common feature of the way in which the capability development process works that Defence goes out looking for something simple, cheap and quick, and easily

delivered, and ends up buying something expensive, complex and hard to deliver and, moreover, fairly risky on the financial side.

If I were to look for the principal source of the risk of cost escalation on projects, I would look not so much at the way in which a tender process is managed and the way in which incentives in the tender process might encourage contractors to bid low but at the way in which Defence works out what it wants and the way in which, both before and after contract, its aspirations tend to grow. One example of this is that, in a wide range of projects, it is very common for Defence to say, 'We'll just buy something off the shelf,' and it ends up buying something which is essentially a unique Australian solution. Often, by a series of incremental steps, each of them quite small in themselves, one moves from doing something which should have been quite simple into doing something which is highly risky and highly costly. That is, in many ways, the most damaging source of additional cost and additional risk, and often additional schedule delay.

That is why I mentioned the second of the three categories in my introductory remarks: deciding what we want and imposing—perhaps reimposing—discipline on that process is very important. I think it would be fair to say that, notwithstanding the very significant reform process which is under way in the DMO at the moment, it would be a widely shared view that the quality and discipline of the capability development process in Defence whereby these decisions are made has not improved in recent years and has probably deteriorated somewhat.

Mr Borgu—I would like to add to that. Senator, obviously one of the rationales behind the setting up of the DMO was the tendency in the past to look at the capital cost of an actual platform. That did not take into account the through-life support costs, the logistics costs, the personnel aspects and the training aspects of that project. In most cases, I think a lot of people will agree, anywhere between 20 per cent and 30 per cent of the cost of a project through its life is in the capital cost. The far greater cost goes towards the maintenance, support and upgrading of that capability once it enters into service. That is one of the things that the DMO is supposed to address in taking that whole of life perspective on the acquisition of capability and was certainly something that figured highly in the determinations of the costings behind the white paper.

ACTING CHAIR—Does the DMO have the ability to do that, or will it need to develop the ability?

Mr Borgu—I believe that the bringing together of the DAO and Support Command into the one organisation is a very good first step. There is then, however, an issue of how the DMO relates to the rest of the organisation—the single services, the personnel organisation, which obviously has responsibility for personnel issues, and also the aspects of the training commands which come under the single services—and not least its relationship with Defence headquarters and the capability development staff. Much of that then goes to the sorts of processes and structures you might have in place to coordinate those. Ultimately it comes down to the secretary and the CDF to bring all of those organisations together in terms of providing advice to government.

Senator CHRIS EVANS—I think we need to home in here, because the argument about capability development is critical. If you think of the Seasprite and the Bushmaster, these things

seem to be issues all the time. I know there is this debate about whether we buy off the shelf or not, and the minister says, in the case of the Seasprite, ‘Well, sure, New Zealand have had theirs for five years but we’re going to have a much more capable helicopter.’ That is probably right, if we get it, but the point is: how do we make that assessment about whether the delay and the extra cost is worth the extra capability? Does anyone ever, in the current system, make those decisions, or is it just a sense of drift—that someone says, as certainly someone said in terms of the Bushmaster, ‘Well, let’s add that on,’ and there was no account then taken of what that meant for the overall design, the weight, the power ratios, all those things? That is a simplistic example, but what is the current decision making process where we make that decision about whether the capability is worth the cost? How do we make it now? How can we do it better?

Mr White—The essence of the situation is that there has been an emphasis, and partly for good reason, on simplifying the orders that the headquarters sends to the Defence Materiel Organisation—trying to make the specifications from the centre of the organisation to the Defence Materiel Organisation as simple as possible, specified in broad terms, and then allowing the DMO to make what are, in essence, a whole series of cost capability or risk capability trade-offs as they go through the selection process to see what is available to fill that requirement. Invariably, there are going to be some adjustments at the margins, and that is a proper part of the process, but I think you can trace a lot of the difficulties we have in these processes to the fact that there is very little visibility in the centre, where the strategic choices are being made, of the consequences of what might appear on the surface to be quite small decisions about different approaches to developing capability.

You might decide to make a relatively small decision on the extent of marinisation of a helicopter, for example. Somebody says, ‘Oh, well, we can get a fully marinised version for a bit extra,’ and you say, ‘That looks like a good idea. We’ll do that,’ often without taking the full cost and risk consequences and the opportunity costs of that sort of decision into account. My own feeling is that there are two responses to this problem. The first is that I think we need to strengthen the capability development process in the centre to have a much bigger role in those kinds of cost-capability trade-offs, which only tend to emerge once the project is under way. Also, we need to maintain a stronger sense of what the strategic imperative is. One of the things that tends to happen is that, as soon as people start focusing on an individual project, there is a great keenness, understandably and in some ways admirably, to try to make whatever it is you are buying as good as possible—the ‘Nothing is too good for our boys’ sort of approach. It is quite legitimate and you think, ‘If we’re going to do this, let’s do it properly.’ One can have sympathy with that psychology. The trouble is that what is deficient is the extent to which people can connect how much more you might end up spending—or the bigger risks or bigger delays you might end up incurring on that particular project—with its impact on other projects and with your capacity to achieve other things. Also, there is a difficulty in maintaining focus on the importance of delivering capability quickly.

The Defence organisation still has, to a significant degree, the organisational attitudes that date back to the decades after the Vietnam War, where deploying forces overseas on operations was something that did not happen very often, and you were developing capability on a pretty long and relaxed time scale. We now have a Defence force for whom serious combat operations are a very common occurrence. Deployments in East Timor and Afghanistan and elsewhere are now fairly normal, and I do not think we yet have a strong enough sense of urgency in the organisation so that delivering good capability now, rather than perfect capability at some

indefinite time in the future, is what the organisation is all about. There is both an administrative issue of the sort that I described, about where the cost-capability trade-offs are made and also a broader issue of how the organisation conceives its priorities and focuses its energy at that broader level.

Mr Borgu—To use two examples of Bushmaster and Seasprite that you used, both of them are illustrative of different problems that the organisation faces. In the case of Bushmaster, the requirement for that vehicle largely came about through the then Chief of Army coming out of the experience in Cambodia, where he certainly saw the need to have a motorised vehicle that was a mineproof vehicle in order to transport our people into battle. One of the problems—and Hugh just alluded to it—is the time scale over which you develop that capability and then procure it and develop it into service is so long that it actually lends itself to the capability creep that you were just talking about before. That length of time makes it far easier for the organisation to add to or change the capabilities, which naturally then has an impact in terms of its cost and schedule further down the track.

The case of Seasprite is an illustrative one of the stovepipe nature of a lot of the projects within the Defence organisation and, again, is something that the establishment of the DMO is supposed to address. We have a situation where the Anzac ship project had a helicopter requirement; we had a joint patrol vessel—an offshore patrol vessel project—which also had one and then we had a separate project to procure a helicopter for both. The problem is that basically they all proceeded along at their own pace without any connectivity between the two, thereby you get a situation when you cancel the JPV, you do not go back and have a look at whether there is still a requirement for the helicopter or whether something like the Seahawk can meet the requirement.

One of the issues Defence is going to need to face is that there are a number of projects that have that connectivity within the organisation today. One example would be the requirement for additional troop lift helicopters, stemming from the white paper. That is very much tied into future amphibious lift requirements and the future amphibious vessels that we will be getting to replace the *Tobruk*, *Manoora* and *Kanimbla*. One of the things that Defence certainly needs to come to terms with is to ensure that that connectivity is always there in a strategic sense so that, if there are problems in one project or another, they are taken into account by the various other projects involved.

Senator JOHNSTON—On the question of standardisation of these acquisition projects, as I read what is happening and I look at what is going on in the various problematic projects, they are all headed in different directions under different specified requirements, with no interrelationship between any of them. Is that accurate?

Mr White—I think that is a bit harsh. Projects that go wrong all tend to go wrong in their own way, if you know what I mean. There are a few recurring themes, like too ambitious software, but the problems all arise from different situations and different difficulties. There are areas in which I think the capability development process works reasonably well—for example, the process that led up to the specification of the AW&C and the approach that was taken to working out what was required there. Admittedly, it was a very ambitious project but with a good strategic basis being established to take an ambitious and innovative approach. That is an

example of the process working reasonably well, although time will tell—it is too early to be definitive on that, but I do not think that process looked too bad.

On the other hand, Seasprite, as Aldo has pointed out, is a pretty good example the other way. To look at the other project that Aldo mentioned, the utility helicopter, it is a good example of where a lack of focus on precisely what is required and what the cost-capability trade-offs ought to be can lead to a pretty serious price drift. The price one would need to pay for a new utility helicopter is going to depend very heavily on the degree to which you want it to be marinised for operations at sea, the degree to which you want it to be provided with things like rapid blade folding so that it can be moved in and out of a hangar quickly and all of those sorts of thing. What will determine how far you want to go down those tracks and how much money you want to spend on them will depend, amongst other things, on whether you want to develop a capacity for a full-scale amphibious assault from the sea onto defended positions on land or you just want a capacity to move troops from a ship onto the shore in a more administrative, less combat oriented way.

Of course you would like that higher level capability and it is easy strategically to conjure scenarios in which that would be worth having. The question for Defence, and ultimately for government, is whether it is willing to spend significant additional sums of money—hundreds of millions of dollars more, probably—to get a helicopter capability that can provide the basis for that sort of operation rather than something that would be cheaper, easier to get into service, easier to maintain in service and quicker all round, but would not provide that higher level of capability. Those are the sorts of cost-capability trade-offs that need to be made.

It takes a fairly sophisticated system which can relate what looks quite a detailed question about the extent to marinisation, to quite high level questions about the extent to which we want to have an amphibious assault capability rather than simply an amphibious deployment capability. You have to have quite a sophisticated system to establish those linkages and to allow the process to refer back to those higher strategic principles periodically when cost-capability choices come up. At the moment I do not think the capability development system does that, and I do not think the system of communication between the DMO and the centre of Defence—R2 and R1, to speak in geographical terms of Russell Hill—facilitates that kind of trade-off being made in an informed way.

Senator JOHNSTON—What would you do to fix it, in detail?

Mr White—My suggestion as to how to fix it would be a fairly radical one, and that is to change in a fairly deep way the relationship between the acquisition and logistics process—the DMO function as it is performed at the moment—and the capability development function. A very high proportion of the cost-capability trade-offs are choices, and therefore a very high proportion of the decisions—which, if made correctly, can produce a good project and, if done incorrectly, can produce problem projects of the sort we are discussing—are made during the process of source selection, somewhere between the time at which a senior committee in Defence produces a one-page specification of what is required in a broader sense, and somebody signs a contract that might be several feet thick, specifying exactly what is required on the other.

I think the best way to improve that interaction would be to move a lot more of the source selection process into the capability development end of the structure. In a sense I should declare my own origins on this issue. I worked in the centre—and I have not worked in the Defence Materiel Organisation—so that perspective might be seen to be a sort of headquarters-centric view—but when working on these issues I have often been struck by how quickly the centre, the headquarters with a strategic perspective, loses control of and loses track of the cost-capability trade-offs, which really drive the cost and schedule and technical risk of the projects as they are actually delivered. I think a better approach would be to move of that responsibility back into the centre.

Senator JOHNSTON—You want to bring some DMO people, with their cost and knowledge in anticipating where things are going—the cost drivers, if you like—back into the strategic planning side?

Mr White—Yes. Put it this way: you need to very significantly expand the expertise that is available in the centre on the cost-capability trade-offs. It seems to me one of the enduring problems in Defence on these issues has been that, although there are a large number of very talented people in the centre, I do not think it has had a sufficient depth of expertise on the very complicated range of technical issues, operational issues and market issues which are required. By market issues I mean what is actually available out there. I think there was a need in Defence to develop a core of what you might call capability development experts or professionals. I want to stress that I do not think Defence is bereft of this expertise, but I do think it is a very big and important part of the business. For a long time, for example, there was a division in the headquarters. It went under various names, but most notoriously under its original name of Force Development and Analysis. It is hard to identify an element in Defence which still does that particular function.

Senator JOHNSTON—So it is a continuity problem?

Mr White—It is not so much. I think, at heart, that it is an expertise problem. There are, of course, a lot of people who work in the headquarters and elsewhere in Defence from the uniform side, with a great deal of operational expertise who are highly professional at operating equipment in the military environment and have a very good idea of operational requirements. There are also a lot of people with a great deal of technical expertise and scientific expertise from DSTO and there is a great deal of analytical expertise, but there are some areas from my own experience where those bits of expertise do not get put together. It is, for example, very hard to find people who really understand what the marketplace is offering at the beginning of the process. What Defence does is to work out on a sheet of paper what ideally it would like and then goes out and asks the market if it can provide it. The market says usually some version of, ‘Yes, at a price,’ whereas if one starts by asking, ‘What can the market provide us and how well will what the market can provide us already do? What compromises would we need to make? What advantages could we get from buying what is already out there?’ you would end up a lot more often with systems and outcomes which were lower risk and lower cost and quicker to deliver.

I do not want to push that thought too far because I think the metaphor of ‘off the shelf’ is sometimes a bit deceptive. There are things you can sometimes buy off the shelf. You can sometimes just go and say, ‘We’d like to buy exactly what that is,’ but it is often not so much

just a matter of buying something which is precisely what is there but of looking for something which is, if you like, a lineal descendant of what is there rather than something which is heading off in a completely new direction. What quite often happens in Defence is that you end up unexpectedly buying what turns out to be the best in the world. Nobody really plans at the outset to buy the best in the world but, by a series of incremental and sometimes not very well informed decisions, you find you accidentally specified a solution which is not gold plated but just solid gold through and through.

Senator JOHNSTON—Is this expertise resident in the DMO, or do we bring it in from outside?

Mr White—Some of it is in the DMO, but I think it is a body of expertise that Defence actually needs to grow more or less from the ground up. It has a lot of the elements. There are people with a lot of understanding of the operational environment—that is obviously critical—and there are people with a lot of understanding of the technologies, but I think it would be very valuable to develop an area of expertise where people do nothing but focus for years at a time on, for example, the radar market, and what is being developed, what is available and what is not. Likewise across all sorts of other different systems and areas.

My feeling is it needs to be developed by people who spend longer in the capability development area than most military officers do. My instinct is that almost the perfect way to develop this area of expertise is to get military officers with very strong operational experience but to leave them in the capability development area for long periods of time, for much longer than the standard posting cycle, so they really develop very deep expertise which draws on their operational experience and also allows them to build up years and years of knowledge of the kinds of systems that are out there.

ACTING CHAIR—But the real problem you run into there is their own career management structures. They actually get themselves locked into a dead end, and so the system acts against itself, doesn't it?

Mr White—You are right, of course. The way in which you would have to do this, it seems to me, would be to develop a structure in which some people decided, 'This is what I am going to make my career out of,' and cease to aspire to be CDF or whatever. It really is a matter of specialisation. You are right to say it is strongly contrary to the way in which successful military careers are presently thought of by the management of Defence, by the ADF as a system and by individuals, but if we keep on regarding capability development as something that people do for just two or three years at a time and then go on and do something else, we will find it hard to build up the kind of depth of expertise which allows us to make these really informed cost-capability decisions where it counts, right at the beginning of a process. That is not to say there are not all sorts of other issues—like the way in which projects are managed and contract relationships are managed and all the rest of it—but it seems to me that, if you do not get that first set of ideas right, it is going to be very hard for the other reforms to make a big impact.

Senator JOHNSTON—The worry I have with your radical plan is that we have had a lot of radical plans going on in this area for the last three or four years.

Mr White—Yes.

Senator JOHNSTON—We take the expertise from outside and from within the DMO, we then combine it with the operational requirements, we ‘think tank’ our way through and develop this central organisation that develops expertise and continuity and all the things we want. Is it not that we want that organisation in the DMO?

Mr White—I think, to a certain extent, as long as you made sure you had that body of expertise somewhere in Defence, it would be in a sense a secondary issue whether it was located in the DMO or in the headquarters.

Senator JOHNSTON—Career issues, I think, are less in the DMO, from just a rough guess. How does that sit?

Mr White—Some of the expertise you would need in this capability development office is the capability development capability that you would want in the headquarters or somewhere in Defence. A lot of the expertise is in DMO, but not all of it. Some of it is not in Defence anywhere. I think pulling together a really strong capability development system capability in Defence is a high priority. My instinct is that it is better to put it in the centre, although, as I said, do not trust me: I used to work in the centre and I had never worked in DMO. But my instinct is to put it there because the really important thing is to refer those cost-capability trade-off issues back to the reason we are doing this, and back to the strategic basis of the issue. I think it is easier to do that in the headquarters—it ought to be and that is what the headquarters ought to be doing—rather than to embed it in DMO. That would allow DMO to focus more on the actual delivery of it.

Senator JOHNSTON—So you are saying that the interface is improved by taking that expertise and moving it right close to the operational side so that you are sitting with them as they are developing their ideas.

Mr White—No. I am saying that capability development expertise needs to be drawn to the point where the strategic choices are being made. One of the difficulties is that the people deciding whether or not to marinise the new utility helicopters are doing it at rather a distance from people who are deciding whether or not we want an amphibious assault capability or just an amphibious lodgment capability and so the reason why we are doing this and what is important to us gets detached from what we are actually doing.

Senator JOHNSTON—In the current context how realistic and how feasible is what we have just discussed?

Mr White—In the light of where we have been in the last three years there are two parts to the answer. It is entirely feasible—and I would say pretty urgent—to rebuild within the headquarters a much stronger capability development element. It would be more radical to take the extra step I am describing and to strengthen that even further; take it beyond where it used to be to the point where a high proportion of the cost-capability choices that are now made during the source selection process are made in a headquarters rather than in a DMO. That would be a radical solution.

It is not unachievable because it does seem to me that a high proportion of the reforms that have been undertaken within the DMO as part of the DMO reform program since amalgamation

have been focused on what you might call the downstream ends of what the DMO does, the way it manages projects and, of course, manages the assets once they are in service. In a sense the amalgamation of Acquisition and Logistics has drawn the focus of the DMO further away from the beginning of the process that we are talking about—the capability development end—and closer towards the actual delivery of the capability once it has been produced and in service.

In a sense I think the proposition I am offering in some ways is consistent with the trend the DMO have been following since the amalgamation of the Acquisition and Logistics side and with the kinds of processes they have had in place in terms of the structural changes and the renewal agenda. But I would not want to say that it was not, nonetheless, a pretty radical idea.

Senator CHRIS EVANS—Mr White, your vision, or your radical plan, is useful because it focuses on this key issue about capability development which seems to be at the heart of a lot of the problems. I think that has been a useful discussion. Is it not the case, though, that effectively you are arguing for a group who go out and purchase the best, having made rational decisions about capability and what is in the market, et cetera? Are we not in a situation where, because of a range of factors, including alliance arrangements, interoperability with United States, concern about intellectual property with other countries which perhaps are not as close to the United States—issues about Australian purchase, as in the shipbuilding—we are not actually in much of a market and that we are, by a range of those decisions, limiting our choices to such an extent that what you talk about is not necessarily achievable?

Mr White—Obviously there are a lot of constraints on capability development and acquisition decisions—the ones you have mentioned—but it still does seem to me that there remains an awful lot of very big and very consequential decisions to make about the kinds of equipment you buy and maintain in order to maintain your capability objectives. Within a framework of limitations, for example, perhaps imposed by interoperability as to what kind of systems we might want to buy—we might place a very high premium, for example, on wanting to maintain interoperability with the US as, say, in our surface ships combat systems—that is obviously going to impose some constraints on the sorts of combat systems you buy. But even within those constraints there are still some very important consequential choices to be made about how big a system you want, how good a system you want, how many targets you want to be able to engage, how much you pay to go from one capability level to another, so that I think it is far from being the case that we are stuck in a position where we have no choices to make. We have a lot of choices to make.

Senator CHRIS EVANS—As to the submarines and the torpedoes issues, are we not again in a situation where we are buying what we are told to buy?

Mr White—No. I think it is clearly an Australian sovereign choice as to whether we should buy one type of torpedo or another. It may well be that all the factors which come into play on that choice end up making it sensible to go one way or the other. One of the factors you take into account is the benefits of interoperability of acquiring the same torpedo as the United States, but you will always have a choice as to whether or not buying that type and following the route that delivers the most obvious interoperability issues actually delivers the best overall capability outcome. No, I think these choices are still there to be made.

Dr Thomson—Senator, if I could give an example with projects just gone through recently for the lightweight torpedo: the European torpedo was chosen in that particular instance. Two of our largest and most recent projects—Air 87 and AEWG—each had a healthy field of candidates.

Mr White—Yes.

Dr Thomson—In the case of Air 87 I think there were three US-sourced helicopters and two European-sourced helicopters. At the end of the day one of the European helicopters won the competition.

Senator CHRIS EVANS—Adding to the number of helicopters we now operate. It is another factor.

Dr Thomson—Which is another important issue we have not talked about yet.

ACTING CHAIR—Don't mention the war!

Senator CHRIS EVANS—While that is true in those examples, there is no in doubt submarine technology we are driving down a path that almost makes us a captive market, are we not? I am not trying to be political but I want to be fair to Defence and DMO in some of this. I tried to make the point earlier about a range of constraints put on them that are political considerations, if you like. The best one is the purchase of the jet fighter. The government made a decision and they will wear the blame if that goes sour, but clearly that was a political decision. In a lot of these decisions Defence does not have that sort of choice we were talking about.

Mr White—Of course the choices are always the government's to make and the issue is, how does Defence formulate its advice to government on those issue? For example, in the case of submarines, even if the Commonwealth makes the judgment—as it very easily could and on good strategic grounds—that it is sensible to limit the range of choice of a new combat system for the Collins 2 US providers, for example, there are still some very significant choices to be made: how big and complicated and sophisticated does that system need to be; how many targets do we want to be able to engage simultaneously; how quickly do we want to be able to process the data; what range of weapons do we want to be able to drive from that combat system; how closely do we want to integrate the different sensors?

Senator CHRIS EVANS—And will we get it installed before the submarines have been replaced?

Mr White—Exactly. If we go to the United States and say, 'Please, can we have a combat system which is going to integrate every sensor in the thing and the espresso machine in the galley as well and process 50,000 targets at once and allows us to fire a huge range of weapons?'—some of which we are never likely to buy—we are going to end up with a combat system which will never be delivered.

If, on the other hand, we go for something much more modest, there is a good chance we will be able to get something in service much faster. It is not to say that those strategic-level

decisions about interoperability and so on do not strongly influence the environment in which the decision is made, but even within that there are still some very big decisions to be made.

Senator CHRIS EVANS—Is it fair to say in those decisions that are not being made now that this capability drift is actually a prominent feature?

Mr White—My point is that the capacity of the system at the moment to make sophisticated and well informed cost-capability trade-off decisions—and by ‘cost’ I do not just mean financial cost but risk and delay and all of those.

Senator CHRIS EVANS—Sure.

Mr White—As to the decisions between how good it needs to be and how much we can afford to pay and how long we can afford to wait, I do not think those trade-offs at the moment are made in a very orderly and systematic way or, in particular, in a way that draws the consequences back up to the strategic level and reminds people why it is we are trying to do this. If you focus on each project, one at a time, it is almost irresistible to try and make each project as good as possible. You have to see the ADF as a whole and you have to understand what it—

Senator CHRIS EVANS—The matching of capability seems to me an issue that gets lost in all of that. While you might have a helicopter that has slightly less capacity, with the \$3 billion that you would have saved by having it delivered on time and within a reasonable project, you could have bought something else that allowed you to match, improve or ratchet-up your capability.

Mr White—Yes.

Senator CHRIS EVANS—Your argument is the sense of that gets lost when you focus in on the project.

Mr White—That is right. If you focus on it project by project, all of those connections and interconnections tend to get suppressed. Of course, there are aspects of the reforms that have been going on in the DMO which do help that, because the SPOs do pull some of these elements together and I think that is useful. But they do that with a strong focus on the user, rather than on a strong focus on the buyer. What does government want? Does government want an amphibious assault capability? Does it want a submarine that can take on the whole of the former Soviet Navy simultaneously, or does it want a submarine which is perhaps not quite that good but which will be fully in service and operational some time soon?

Senator CHRIS EVANS—Under the current system, is that question ever asked after the initial approval? After cabinet ticks off on buying the Seasprite, does that question ever come back?

Mr White—There have been important changes in that since the last white paper. One of the changes that was implemented in the process immediately following the white paper in 2000 was this two-pass process, whereby projects were approved firstly as a broad idea—what, broadly, are we after and what kind of money are we talking about?—and then came back later

in a more detailed form. I think that is a very good discipline, a very good reform. It may well be impractical to take issues back to cabinet more than twice, but the fact is that the sorts of choices that end up being made in these complex acquisitions require repeated cycles of analysis of, ‘What is available?’ ‘How much will it cost?’ ‘How much will it benefit us?’ ‘Are the benefits worth the extra costs strategically?’ Then you go back around the cycle again and again.

At the moment, those cycles are undertaken as part of the source selection process in the DMO. The purpose you would be aiming to achieve with the radical reform I am offering is that you would greatly improve the strategic input to that cost capability process. Rather than just seeing it as a way of getting the contract done, you would be referring back to, ‘Why do we want these things?’ ‘What are the priorities?’ ‘How does the priority for this capability relate to other capabilities?’ They are the linkages that you were talking about before.

Senator JOHNSTON—I want to come back to the beginning. You were talking about three things—and correct me if I am wrong because I did not write them down fast enough—getting what we want, deciding what we want, and I think the last one was knowing what we are getting.

Mr White—Yes.

Senator JOHNSTON—I might have missed this in your discussion. Are they in a particular order, because I think the second one should be first?

Mr White—Yes, that is quite right. I was being respectful to the committee’s terms of reference by starting off talking about what was happening within the DMO. That is an important set of issues, but once you get what is happening within the DMO right, you then want to pull back and say, ‘A lot of these projects are going wrong, not because or solely because of problems within the DMO but because what goes into the DMO at the start of the process is not sufficiently well understood.’ That is exactly the issue.

Senator JOHNSTON—Deciding what we want is the first thing?

Mr White—Yes, the first thing.

Senator JOHNSTON—Good.

ACTING CHAIR—You are saying that decision-making process should be with those people who have a strategic approach, rather than a purchasing approach?

Mr White—Exactly. Rather than to express the point in terms of where and in whose bureaucratic empire would this entity fall, you want to focus on the result. The results you want are strategically informed cost-capability trade-off decisions—that is, cost-capability trade-off decisions that do not relate to what it is going to be like to manage this contract, looking downstream, but looking back up to the buyer, in the end the poor old taxpayer, saying, ‘What is it we’re trying to do with this again?’ Developing that perspective will stop people from saying, ‘Let’s build a combat system for the submarines that can take on every other submarine in the

world simultaneously,' and say, 'Well, actually, no, we don't need that much. Let's go for something a bit lower and cheaper and quicker.'

Senator CHRIS EVANS—I would like to raise some more global issues, because I am trying to understand this question of the Defence Capability Plan and how these project delays and cost overruns impact on that Defence Capability Plan. The Seasprite is classic. We have not had that capability; it will be four years post when we wanted it. When a Defence Capability Plan is approved, how do you manage those delays and the overruns and what does that mean for the Defence Capability Plan and the projected capital budget? It seems a bit haphazard to me.

Mr White—There are three elements to that. The first is that I do think the establishment of the Defence Capability Plan was a very significant step forward for Defence and for the government in terms of the way in which it manages the long-term development of capability. Before we had the Defence Capability Plan, Defence did not have a long-term plan for its capabilities and the capabilities themselves, of course, are very long-term things. There was nothing that looked forward with dollars attached to them and said, 'This is where we want our individual capability elements to go, and this is how much it's going to cost and this is how it's going to fit within a funding envelope.'

The decision by government in doing the white paper in 2000, to put together a long-term plan stretching out to 10 years and, indeed, looking forward in total to 20 years, and to put clear funding parameters around that first 10 years, was a very significant, radical and valuable forward step. That is the first point. The second point, of course, is that inevitably, when you are working out at the 10-year mark, and even more when you are working out at the 20-year mark, this is not precision guidance. This is not to the nearest dollar. There are a lot of uncertainties and any organisation undertaking long-term planning has to accept that there are going to be some uncertainties, that things are going to change and that you will have to adjust at the margins.

As you develop the plan, as the plan unfolds and time elapses, you have to ask yourself, 'Are the problems, the issues, we're running into, so big that they disrupt the basic architecture of the plan, or do they just require some adjustments at the margins?' There need to be adjustments at the margins all along. You do not need to keep your eye on the projects which are a bit more expensive than might have been expected or slipped a year or two one way or the other; it is the ones that really put that ink blot right in the middle of the whole thing. That is at the heart of the process of asking, 'To what extent are the sorts of issue that are arising now big enough to cause major long-term distortions or disruptions in Defence Capability Plan?'

Remember we sit outside the Defence Organisation, we just read the publicly available information, but there is some evidence of some major issues in the DCP which may start to affect what you might call the basic architecture of the plan: issues like the way in which the provision of front-line air combat and strike capability, the capability now embodied in the F18s and F111s, is maintained through until the period where the JSF comes into service. That is a long time. If one was to pick a date, it is probably 15 years from now, and they could be a strategically pretty complex and interesting 15 years.

Some of the suggestions one hears appear to indicate that the previous proposals—that is, that the F18s and F111s be upgraded to maintain an adequate level of capability until a replacement

aircraft is introduced under Air 6000 in that 2012 to 2015 time frame; that was the timing in the white paper—may be out of favour and people are looking at some alternative solutions. If that is right, my guess is that you would need to spend a lot more money than is now scheduled. By ‘a lot more money’ I mean billions more money. That might be an issue which is big enough to bend the basic architecture of the DCP out of place and not just swing a bit of money one way and another. It is always unwise to appear even remotely flippant about taxpayers’ dollars, but 100 million bucks here or there does not make a big difference to Defence Capability Plan as a 10-year project.

Senator CHRIS EVANS—Sure. I accept that.

Mr White—But \$2 billion or \$3 billion, that is real money in anybody’s terms, even in long-term Defence planning terms. In the end, to give you a simple but, I think, accurate answer to your original question, when the government faces those sorts of choices—and I suspect it may—then there are three choices: you spend more, you do less or you squeeze harder.

Senator CHRIS EVANS—I accept that. You mentioned the F111 and F18 issues and replacement of the aircraft. What about the shipbuilding proposition and the impact on the long-term Defence Capability Plan? The government’s paper talks about moving to a 20-year replacement cycle for the ships and about the desirability of managing the demand for ships in terms of meeting industry needs. Do you have any comments on how that would impact on that DCP architecture?

Mr White—I will make a couple of introductory comments, and then Mark may want to add some points. The question arises at two levels. The schedule for replacement of the present classes of ships or introduction of new classes of ships in the Defence Capability Plan was based on the withdrawal date of the present ships, considered from what you might call a fairly pure perspective.

What results from that, because of the product of history, is a shipbuilding program which is rather ungainly; a bunching of major projects around the end of this decade and early next decade. It seems to us that one of the most useful things that the government can do in terms of facilitating the long-term development of the naval shipbuilding industry in Australia is to even out that demand, instead of having a lot of bunched projects. That will be unlikely to come cost free. You might either have to keep some ships in service later than you had expected or pay them off earlier. Those sorts of solutions can have a range of costs, so obviously that is not cost free. I do not think the costs that would be involved in that would be big enough to bend the whole DCP out of shape. If you had a capability plan which was basically in good condition you could, I think, with an acceptable level of risk, manage the timing of those individual projects, not without cost but at an acceptable level of cost, in order to make life a bit easier for the shipbuilding industry.

The idea of moving to a deliberate cycle or a pre-planned cycle of early replacement of ships in order to facilitate a steady load for the shipbuilding industry would require a much larger investment. It would require a commitment to very sustained capital investment in surface ships which would, I estimate, require a significant expansion in the overall share of money going into naval shipbuilding as opposed to other kinds of capital investment from what we have had even if you look back over the last 20 years, which has included a period in which there has

been very heavy shipbuilding activity. For that reason, you can only undertake that strategically; if there is a strategic reason to increase the priority you were going to give to surface ships anyway. I think that is unlikely to be the case.

There will always be a very important place for surface ships in the ADF but I find it hard to imagine situations in which we decided, if we had more money to spend on defence, we would spend it on more surface ships rather than more of other types of capability. I think a move to a kind of regular perpetual naval shipbuilding program on a 20-year cycle would be a big enough change in the amount of money we are spending on shipbuilding to really bend the DCP and require some very significant changes in strategic priority, ones which I do not think would be justified on the strategic fundamentals.

Dr Thomson—I just want to make a point about the shipbuilding schedule as it sits at the moment. There are two very stark peculiarities in it. One is that the replacement of the amphibious vessels—HMAS *Tobruk* and then the two LPAs—are separated by, I think, five or six years, so you have essentially what you would want to replace with a single class of vessel but the replacement schedule is such that you are frustrated from having a single and continuous build program. It is the same thing with the float support vessels. We have *Westralia* in 2009 and *Success* in about 2015; once again, two vessels that you would like to replace with a single build program but with an enormous gap in the middle.

Off the cuff it is difficult to say how this could be solved, but I think it comes back to Hugh's point earlier about having people in the capability decision-making process who understand the market and can think innovatively about how we can get around this sort of problem. Now I will speak off the cuff. Looking at HMAS *Tobruk* going in about 2010, HMAS *Jervis Bay* the fast cat from Tasmania did a great job in Timor; could we perhaps for that interim period lease a fast cat, not with the same capability that *Tobruk* gives us, a different capability—nevertheless, one that might see us through—and then we could replace the three amphibious vessels in a single block.

Yes, this would have impacts on the DCP but in this case it would be quite a manageable one because you would be deferring expenditure into the future. It is those sorts of innovative approaches, along with people who understand the market and understand the capability and the strategic imperative for the capability and the rationale behind it, that we need to try to smooth out this program. On the question of vessels going from 20 years to 30 years, I think it is important to see that proposal in its context. It is basically a proposal about frigates in the detailed analysis there.

Mr White—Yes, that is right.

Dr Thomson—We have just bought the Anzacs. There are still four to be delivered at this point in time. We are going to have them for a long time. Once the FFGs begin to pay off, the investment we have in them will be replaced by new investment in the air warfare destroyer. Any proposal for having a rolling program of frigate production is something for people who will be worrying about this long after we are all retired.

ACTING CHAIR—That is good news!

Dr Thomson—In principle it might be an interesting proposal. Even if it was to be supported by a detailed, rigorous analysis—and I should say that the data in the strategic plan is self-admittedly stylised—it is something for the far distant future. It is not a solution to the problems that the DCP has with regard to shipbuilding schedules today.

Senator CHRIS EVANS—Thank you for that. I will leave it there, Mr Chairman.

ACTING CHAIR—We are trying to sort out whether there are any other issues. We are going to visit Bushmaster. Are there any specific issues we should be looking at when we visit the site?

Mr Borgu—Following on from what Hugh was saying, Senator, the issues we have with Bushmaster relate to the capability definition side. That goes to the whole issue of whether or not we should have procured Bushmaster. Personally, as to the benefits in terms of the capabilities specified for what we originally wanted, we have moved on from then. I think it would have made far more sense to procure additional ASLAV vehicles rather than bringing yet another system into service, with all its particular logistical requirements and the like, not the least of which is that this is another orphan system. We will be the only country in the world that operates these vehicles, as opposed to the many countries that operate ASLAVs or LAV vehicles, albeit different types of models. But there is a sense of commonality.

Our concerns would purely be pointing out the importance of getting things right at that capability definition stage, where we actually do try to sort out whether or not we need it. It illustrates the problem once a program has commenced and money has been invested in it. I really do not know of any example where Defence or the government have cancelled a project. It occurs certainly in the United States and I will add that it largely occurs at the political level when the Secretary of Defence makes a decision to cut their losses on a particular project. We also had it recently with the Crusader artillery project, and there are a number of other examples as well. It has to be a case where we are willing to look at whether or not a particular capability or system still meets our requirements. To a degree, one of the things that September 11 demonstrates is how requirements can change; more importantly, they can stay the same as well. In most cases, the life of Defence projects—from concept definition stage to when you get the project into service—can be anywhere from five to 10 years.

The JSF would be a perfect example. I agree with Hugh: I find it very unlikely that we will get that aircraft into service for at least 15 years. A lot will change in that process and we have really got to have the ability to change our requirements as they come across.

ACTING CHAIR—I have two further questions. What is your view of the justification for and the effectiveness of the dispersment of Defence personnel to the various SPOs around the country?

Senator JOHNSTON—‘Disruptive’ was the word you used.

Mr White—Yes. It is worth distinguishing between the consequences of the change and the effectiveness of the new system. I think that model is quite an attractive one, particularly as the Defence Acquisition Organisation and Logistic Organisation have been drawn together and I think, quite properly, are focused on this new role of being the owner and provider to the

operators of the capabilities. As I say, that is what drags the DMO down the stream, down towards the delivery of capability rather than upstream towards the sorts of choices that I have been talking about before. I think the SPO concept and the idea of company-locating it as much as possible with the operators makes a lot of sense. Obviously the process of getting there is going to be quite painful but there can be benefits in that.

I was quite closely involved with the decisions to move DSD, for example, from Melbourne to Canberra and I was an interested observer of the process of moving ASIS and ASIO to Canberra. There were many concerns in those organisations that those moves would be deeply disruptive and, of course, in a way they were. But they also provided in each case an opportunity for a bit of a fresh start, new life in a new land sort of thing, and I think overall those organisations would all say that they are quite positive. For people involved in the delivery of capability, and particularly on the latter stages of acquisition and into the support and through life support sides, getting out there close to where people are trying to make these things work and turning them into real life capability is a pretty good idea. My instinct is that it is conceptually a good proposal.

But none of the problems are going to be solved by what you might call organisational fixes. The SPO concept and the associated reforms that they have under way in the DMO are a good way of exploiting the benefits that are available through the amalgamation of Acquisition and Logistics. Of course, just setting up those organisations does not do it by themselves. You do not need to tell Mick Roche that. He has a comprehensive plan for the way in which the processes have to change and the approaches that people take have to change and I think it is a matter of making all of those bits work.

ACTING CHAIR—Thank you. Do you have any general advice about the fourth matter of managing the software development aspects of major projects?

Senator CHRIS EVANS—We save the easiest one till last.

Mr White—If I had a really good idea on that, I would try and charge someone for it.

ACTING CHAIR—Is that a hospital pass?

Mr White—I will try and offer myself as an initial casualty anyway. I will make two observations. The first is that software is obviously tricky stuff. We make it hard for ourselves in two ways; perhaps more than two ways, but certainly two ways that have been obvious to me from my perspective on these things. They both go back to the points I was making earlier. It is a question about what it is we are trying to achieve. One of the troubles with software is that it is so beguiling to think that you can defy the laws of physics with this stuff and that, if you can make a software system which can handle 70 contacts, why can't you make one that can handle 700? Or if you can make one that can allow you to integrate this amount of information, why can't you just make it a bit bigger and get all this other information in as well? It does engender a sense of ambition in the people who are building these projects.

At one level I have to acknowledge that that reflects a rather admirable feature of the Defence system, and particularly the ADF system, and that is a sort of slightly boyish enthusiasm for innovation and doing things as well as you can and you certainly do not want to suppress that.

But I do think that a more disciplined force development process which imposed tougher cost-capability trade-off judgments on the system would end up with less ambitious software goals and basically faster, cheaper, more reliable delivery of product as a result.

The second point I make is a more specific elaboration of the first and that is an almost gravitational attraction of Australian unique solutions—‘Everybody else has integrated that, that and that system into a single integrated system but, gee, we’d rather have a pink one than a blue one, so why don’t we just do it a bit differently?’ I wear a few campaign ribbons on some of this stuff and people say, ‘Look, we want to mix it a bit differently, but don’t worry, the integration problems aren’t very great.’ What we need to do is to establish within Defence and within government a very great institutional reluctance to go down unique routes. There are costs for this.

To take electronic warfare self-protection as an example—and this is an immensely complicated, very expensive but very important area of capacity—in the nineties Defence developed in broad terms an ambition, an agenda, to develop single integrated coherent EWSP capability across the ADF in which there would be a lot of commonality between different platforms, it would suit Australia’s strategic circumstances, we would build a lot of intellectual property ourselves in Australia and all that sort of stuff. It sounded pretty attractive. Then you started saying, ‘Are we going to apply this to the FA team?’ ‘Well, no, because there’s a USN fit on the F18 and if we try doing something different, then we’ll blow the F18 apart.’

You find in almost every project you have a lot of issues which are unique to that project and often there is an original equipment manufacturer or a parent service solution to the problem and you can either take that or you are out on your own. My instinct is that often we will end up with a genuine loss in losing opportunities to build an ADF-wide solution on all sorts of things because instead you end up having a USN solution on that and a USAF solution on that—and you can be sure they will have nothing in common—and a British solution on that and a French solution on that.

Frankly, going for the big bang approach where everything comes together in a perfectly integrated structure is desirable. You can see the pressures in favour of it but the history of our EWSP performance, for example, particularly on aircraft, is ‘a nice idea but you don’t deliver’. As a strategic policy-maker and, for that matter, as a taxpayer I would rather have a less splendid vision that provided more capability than actually put in harm’s way. The second point, I guess, is do not just be modest in what you are aiming for as a capability but be extremely sceptical about Australian unique solutions and accept the compromises that that will entail.

Dr Thomson—Continuing on from what Hugh was discussing in terms of Australian unique—

Mr White—And he has actually written some software.

Dr Thomson—In some cases Defence find themselves in a difficult situation with regard to integration, not because they are aspiring to have the best or the most wonderful subsystems integrated together but through an honest desire to have common systems across the ADF which will save on logistics costs. The point I would like to make, and coming back to the issue

of making decisions properly, that are well informed at the capability and definition stage, is that there is a business case to be made.

The question is, ‘What is the better way to go over the life of the entire platform?’ Do we put in, for example, a radio which is common with other radios and other platforms in the ADF and thereby have a much reduced training bill for the people who have to repair that equipment, an economy of scale with the person we deal with and at the same time then pay an additional bill to integrate that radio onto a platform, or do we go with a radio that has already been integrated onto the platform and pay the additional cost of having multiple systems, multiple subsystems, in the ADF? The answer is that you work it out and you make the decision that is going to deliver the best value for money to the Commonwealth.

Mr Borgu—There are two issues generally when it comes down to questions of software: one is basically the software itself, the lines of code in terms of development of an actual system. A far bigger issue, though—and Hugh alluded to it—is sensor integration and data fusion. Most of the requirements nowadays are to network all of these elements, the various sensors that a platform might have, into the one area. In terms of the solutions, without being overly simplistic, it is twofold. Again, going on from what Hugh said, we always seem to go for the 100 per cent solution to meet our requirements. One of the things that a number of people ask is, ‘Why not go for the 75 per cent solution with a 25 per cent upgrade path?’ It comes down to that capability definition stage as far as not being overly ambitious.

The second area that I think really needs to be looked at is the actual oversight arrangements that are put into place on projects. Two of the things that frustrate the government most over acquisition projects are the lack of accountability and responsibility. One of the things that the government has done with the AEW project—and this was learnt from the Collins episode—is to put a person in charge who is going to be responsible for that project until the first aircraft touches down on Australian soil and enters into service, and the person is promoted on that basis and is accountable for that. That happens all too rarely within Defence projects. Obviously with the JSF it is difficult to do because I cannot see someone being in there for 17 years—

Senator CHRIS EVANS—You would have to pick a very young person.

Mr Borgu—That, though, does raise questions as to whether you should in fact make a procurement decision 17 years before you are going to acquire the system, but it does raise the whole point of the importance of the oversight arrangements that you do put into place.

ACTING CHAIR—All right. I do thank you for appearing before the committee this afternoon. There will be a couple of questions that we want to put on notice to you because we have run out of time, so if you would handle those for us we would appreciate it.

Mr White—Sure.

ACTING CHAIR—The committee stands adjourned until the next date of hearing.

Committee adjourned at 4.00 p.m.