

Welsh Affairs Committee

Oral evidence: [Wales and the Armed Forces](#), HC 2031

Tuesday 11 June 2019

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Members present: David T. C. Davies (Chair), Tonia Antoniazzi, Guto Bebb, Chris Davies, Geraint Davies, Jonathan Edwards, Susan Elan Jones, Ben Lake and Jack Lopresti.

Questions 62 - 109

Witnesses

[I:](#) Peter White, Managing Director and Vice President, Land Equipment, Qioptiq Ltd; Roland Howell, Director of Airborne Intelligence, Surveillance and Reconnaissance, Raytheon UK; and John Whalley, Chief Executive, Aerospace Wales.

Examination of witnesses

Witnesses: Peter White, Roland Howell and John Whalley.

Q62 **Chair:** A very good afternoon to Mr Whalley, Mr Howell and Mr White. Thank you for coming along to talk to us about the defence industry in Wales. I am going to call on my colleague, Chris Davies, to ask the first question.

Chris Davies: For the record, gentlemen, could you tell us a little bit more about your companies' work in Wales, primarily Mr White and Mr Howell?

Roland Howell: My name is Roland Howell. I run the Airborne ISR division of Raytheon UK. That business is approximately 500 people supporting two of the Royal Air Force's critical intelligence, surveillance and reconnaissance platforms. We provide support, training and spares-type activities forward at RAF Waddington in Lincolnshire, but the headquarters of the business is in Broughton, Wales, where I have just under 300 people. We provide aircraft modification, depth maintenance, design and continuing airworthiness. We have a facility there with approximately 150,000 square feet of hangarage and provide support to those two platforms.

John Whalley: John Whalley, Aerospace Wales Forum, Awyrofod Cymru. We are the industry association for aerospace, space, defence and aviation in Wales. We have about 180 members. If we look at aerospace and defence combined, in Wales we have something like 10% of the UK workforce, as against 5% of the UK population, so in this area we definitely punch above our weight.

Peter White: Peter White, Managing Director of Qioptiq Ltd in north Wales. We are based in St Asaph. We have been there for 52 years; this is our 53rd year. Historically we were part of Pilkington Glass. We then spent a time being owned by Thales and we are now privately owned by an American corporation called Excelitas Technologies. We employ 635 people in north Wales. Our turnover is about £100 million and we are an optical engineering company. We solve optical problems for defence and aerospace companies. You have probably seen our product or it has been involved in things you have done, but you would not have seen the name. We supply to the UK MoD. We supply to many OEMs like Raytheon, Lockheed or Thales, and we supply to the aerospace industry as well.

Q63 **Chris Davies:** To Mr White and Mr Howell, why Wales? Why are your companies based here and what benefits do you see from operating from Wales?

John Whalley: From a Welsh aerospace and defence perspective, a lot of it is historic.



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Chris Davies: I think the gentlemen are not moving their lips there but, Mr Whalley, you are answering well.

Roland Howell: I will start. Raytheon has a long legacy in Wales, going back certainly with the Raytheon name to the early 1990s and back through legacy companies to the Second World War. In recent times, Raytheon Aircraft Corporation operated from Broughton. Back at the end of the 1990s, with the ASTOR programme, which was the birth of the Sentinel aircraft, it was the obvious choice for us to use that facility. Because the supply chain is available there, it is a hub for aerospace activity. The skills base is there and it makes sense to maintain that capability.

John Whalley: If I may interject, I think that it is also fair to say that the original Raytheon business spun out of Corporate Jets, which was based at what is now the Airbus site. British Aerospace in the 1990s sold that business off to Raytheon. They subsequently divested it to Hawker Beechcraft, but the Raytheon business sprang back into life with the aircraft that it now produces.

Roland Howell: It did with the Sentinel programme, correct, yes.

Peter White: We are based in north Wales. I think that there is a family connection to Pilkington Glass. I think that Lady Pilkington lived in St Asaph and the story goes that the Pilkingtons wanted to site a factory somewhere where the air was clean and the water was pure, and that was St Asaph. It was a family connection. The business that was created there has now gone. We were the legacy of that. We employ 635 people. We have spawned other optical industries courtesy of the Welsh Government, and the WDA as their predecessor. There are probably 2,000 optics-related jobs in north Wales and St Asaph.

Q64 **Chris Davies:** Mr Whalley, both companies on either side of you are very north Wales dominated, which is great for north Wales. Why do you think south Wales and certainly mid Wales are not getting the benefit of this investment?

John Whalley: South Wales does feature because we have companies like General Dynamics, and of course GE, which is the aero engine side but does a little bit of defence-related work, and a number of other companies that are on the edge of the defence business. I think that overall distribution is pretty equal in both parts of the country. Mid Wales is less well-featured. The only significant participant in the mid Wales scene is the Aberporth and Llanbedr segregated airspace, the MoD range in that area.

Q65 **Chris Davies:** We have an excellent range in Brecon and Radnorshire, if I may push it, the Radnor range, which—

John Whalley: I am aware of it.

Chris Davies: Well, I hope so.



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John Whalley: It is a member of the forum.

Q66 **Chris Davies:** Yes. I visited the other day and it was very impressive. They carry out a great deal of testing in that site. Do you think there is bigger scope for companies like that in mid Wales, or do you just think that because of the topography of the land, certainly as far as planes are concerned, it is quite difficult, but other testing can be done in that area?

John Whalley: I think that we have a wonderful legacy in Wales from World Wars One and Two in terms of some of the aerospace businesses. If you look across Wales at what I call test and evaluation sites, like Radnor range in the private sector and Pendine and Aberporth in the MoD sector, albeit mentioned by QinetiQ, we have some wonderful facilities. Over the years they have tended to go down in terms of their usage. One of the things we did in mid Wales was open up the Aberporth range to civilian use for UAV development. I think that there is an opportunity to exploit the MoD facilities right across Wales in a whole host of new areas. One area we are looking at is the testing of rocket engines in connection with space launches. Westcott is the obvious choice, the historical site, but it is very constrained in terms of the buildings around that area and the footprint, whereas in Wales we have a substantial number of areas where we can make things go off with a bang.

Q67 **Chris Davies:** I would say just on that answer that a lot of significant investment has gone into the Radnor range, so it is not on the decline; it is very much on the way up.

The Committee visited Brecon just a few weeks ago and saw the great facilities we have there with the Infantry Battle School, Sennybridge Army range and the barracks and so on. We are very much punching above our weight in recruitment and in Army bases. If the military declined in Wales, do you think that the industry would follow that, or do you think that the industry is strong enough to maintain its own position for the rest of the United Kingdom, and is not purely dependent on Wales?

John Whalley: When you say the military, are you referring to the troop deployment in Wales, or the industry as well?

Chris Davies: Everything—troops, going back to our old air force bases, everything. If the military declines in Wales itself, do you see the private industry following that?

John Whalley: I think that there are some significant potential black holes. If we look at Anglesey, for example, which has real challenges in terms of employment, RAF Valley, which employs about 600 or 700 people from civilian life, would be a huge loss. If anything, that is growing and we are as a country investing in RAF Valley, but if that were to go, sure, there would be a huge hole there. I think that the same applies to many of the other sites.



When it comes to companies, of course many of our companies operate in both defence and civil markets and therefore could probably ride the storms. There are some companies, such as Raytheon and to a degree Qioptiq, who are very much focused on the defence market.

Q68 Guto Bebb: First, obviously I am very pleased to see both companies here from north Wales. I have constituents who work in both, and obviously in terms of contributing to the high-skilled economy of north-east Wales you are very important.

The first question is: have you any particular views of the refreshed defence industrial policy, whether good or bad? How do you think the developments within the MoD are playing in terms of your future hopes and aspirations as companies in north Wales, or in Wales, for that matter?

Roland Howell: I can talk about Sentinel, and I will start with Shadow. As you will be aware, we were put on contract for an 11-year support arrangement for the Shadow fleet at the end of last year. My view is that that is an example of great collaboration working with both the Welsh Government and the national UK Government, and also the stakeholders, in terms of the air force air capability and DE&S to establish the strategy and to get to a point where we were able to put that work in place that gives us assurance around the Broughton site in supporting Shadow for the next 10 or 11 years.

On Sentinel, we are not quite there yet, although we continue to work in the same way. We see the same collaborative approach from the MoD stakeholders, and we are hopeful that, subject to the right decisions being made out of the CSR, we will see the same impact there, and that benefit, not quite to the same extent as Shadow, but certainly there will be a positive impact to Broughton as a result of a decision on Sentinel extension.

Peter White: As a company that sits perhaps slightly down the food chain compared to Raytheon, it is difficult to relate the defence policy to things that exist in our world. I look across at the US. I was there two weeks ago looking to take our technology there. They are very clear and transparent, in their product and equipment strategy, about their needs. We do not see the same clarity in the UK. I could not espouse what the UK is thinking of doing with its product, but I could tell you what the US is thinking of doing with its product. Sometimes the policy sits very high and does not benefit the OEMs and the small companies, and I think that they are just as important to the economy of Wales as the big companies like Thales, GD and BAE.

We won the STAS contract, which means that we are the only company in the UK that is supporting the dismounted soldier for the whole of his equipment. Whether it is binoculars, weapon sights et cetera, we won that contract and we won that to support for 11 years. We won it in



competition with some of the big guys, so give the smaller companies a chance and they will give you a sustainable growth.

Q69 Guto Bebb: To follow up on that, clearly the relationship between the UK Government and the sector is crucial. Are you saying that you feel that smaller businesses are somewhat excluded from that conversation, or is that just a feeling that you have in a Welsh context?

Peter White: I speak for myself; I cannot say I speak for many others. I would think that it is hard to get heard. It is hard to get visibility of who you are. We have put a lot of effort into increasing the brand knowledge to give ourselves what we thought was a chance for the STAS contract. Everybody knows about Thales, GD, Leonardo and Harris, and probably nobody had heard of Qioptiq. We changed that before the competition deliberately. It took a lot of effort, but smaller companies maybe need some support.

John Whalley: If I may input from the broader industry point of view, on the aerospace side, we have the Aerospace Growth Partnership, and before that we had the aerospace innovation and growth team under the Labour Government, so there has been quite a high-profile partnership between industry and Government over many years. Our association is linked with four associations in England and ADS, the national association, and we exchange information and we participate in AGP activity. Therefore we have pretty good visibility, I think, of what is happening on the aerospace side.

If I now compare and contrast with the Defence Growth Partnership, it is almost invisible. In fact, that is probably an exaggeration; to a large extent it is invisible. We do not get the visibility, we do not get involved, and it is almost by chance that smaller companies get to access some of the potential defence contracts. Getting feedback is an area where there is real scope for improvement.

In terms of defence industrial strategy, again visibility is not good at the moment. We have had a couple of reviews. I think that the creation of a national defence strategy must also be a key priority.

Q70 Guto Bebb: To follow up with Mr Howell, you highlighted the fact that you developed a relationship with DE&S, which is obviously the procurement arm of the MoD—not completely, but it does a lot of procurements on behalf of the MoD. Mr White as well, you can come in, if it is relevant. How did you develop that relationship with DE&S? Was that direct to them, or was it through the MoD centrally that you got hold of the relevant contact in DE&S?

Roland Howell: Direct, really. We engaged the stakeholder community and the MoD in terms of the air force air capability to understand what the requirements are, worked with the DE&S stakeholders and developed a partnership to understand what any proposition needs to achieve to meet the criteria to be successful. Clearly talking about strategy, it is



about affordability and value for money. We worked very hard with the MoD to develop a proposition that meets those needs and is then able to get through the approvals process so that we can deliver capability as early as possible.

Peter White: I think perhaps our businesses are faster turn than Raytheon. DE&S we have a very good relationship with, but they are the executors of the programme; they do not direct the strategy. Sometimes you have to get the connection to HQ as well and have the visibility of where HQ want DE&S to go. In a fast turn, where technology is making product almost obsolete within five to 10 years, you need to stay alert and understand the direction of that strategy because we have to evolve the product to meet the needs.

Q71 **Guto Bebb:** In terms of the actual day-to-day involvement with DE&S, has that been positive?

Peter White: We have a really good relationship with DE&S. I think that they do a good job of executing the demand. It takes time to come through from HQ and sometimes that time is a frustration.

Q72 **Guto Bebb:** I have a final question. Obviously I was a Defence Minister for a while. One of the things that we tried to highlight was the importance of working in a coherent manner across Government to support the defence sector. On visits to Wales, I have always been very impressed—but you can correct me if I am wrong—at the way in which the two Governments have worked very constructively to support businesses that have won contracts with the MoD. For example, you have highlighted the skills that are available in north-east Wales, and obviously the skills funding comes from Welsh Government through FE and university sectors in that part of the world. In the same way, when I visited Qioptiq, the Welsh Government were rowing in behind some of your developments in terms of funding the development of new, modern facilities.

Do you think that relationship between the Welsh Government and the opportunities that are presented to you works well, and are there areas where we can seek to improve the way in which the two Governments work to support successful contract holders such as yourselves?

Roland Howell: For my part, I think that it has worked well. We have delivered success from those arrangements, so for me it is a very positive structure.

John Whalley: Again, I have worked with Aerospace Wales now for nearly 20 years, so I have seen many Secretaries of State come and go, and a few First Ministers. I have to say the current Secretary of State and the current Minister for the Economy in Wales have a very good working relationship from my perspective—a very good personal relationship. That has probably damned both of their careers, but it is a good relationship. At the civil service level, it is also a good working relationship. There are some really good positives out there.



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Peter White: I would agree; I would echo that. We had the support when we needed it, and I would echo the statement from John. I think that the respective people work together very well.

Chair: That is good to hear.

Q73 **Susan Elan Jones:** It is fantastic to have such excellent north Wales companies. I know that it has already been said, but you cannot say it too often. I would like to ask a couple of questions primarily to Mr Whalley, if that is all right. To begin with, the National Audit Office has deemed the latest equipment plan unaffordable. Do you think that is a fair comment?

John Whalley: I don't have a detailed answer to that. I have only read what you have read. I certainly think my gut feel is that it is a challenge.

Q74 **Susan Elan Jones:** A challenge, thank you. Would you say that there are any risks to current or potential investment in the Welsh defence industry as a result of savings being made in the procurement of equipment?

John Whalley: One of the obvious ones that has come up recently was the Sentinel fleet. Roland, do you want to say a little bit about that and how it was resolved, or is yet to be resolved?

Roland Howell: It is yet to be resolved. Decisions around affordability have affected the Sentinel platform. We have worked very closely with the MoD in providing them with answers and working with them to develop a proposition that achieves those elements of the affordability question that relate to that platform. The final decisions we expect will be made out of the CSR that is anticipated to report out towards the end of the year.

In the interim, we have been working with the MoD to protect or to put in place things that will protect their decision space, in terms of not closing any doors. Most recently, we were contracted for a depth maintenance activity on the fifth Sentinel aircraft, which is ongoing now in Broughton. If you are not aware, as a result of the 2015 SDSR, the fleet was extended, but with four aircraft rather than five. We have been maintaining a fifth aircraft in a preserved state. That is now being brought back into line under that contract, and we see that as a good indication that there is a will to extend that fleet and continue with the capability that it provides.

John Whalley: I think that is an example of where, if decisions are taken in silos or behind the wall of the commercial contract, you do not always get the best decision. I am a huge believer in collaboration, getting people around the table and saying, "How do we make this work? How do we get value for money?". With the challenges that inevitably do exist and always will exist to a degree, we have to find a better way of collaborating between industry and Government without infringing on good commercial law.



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Q75 Susan Elan Jones: That is interesting; thanks very much. A final question from me: Professor John Louth, who is of the Royal United Services Institute, came here also as a witness. He said that deficiencies in the equipment plan have resulted in rationalisations that have “effectively hollowed out the defence footprint in Wales”. Would you care to respond to that?

John Whalley: I am assuming that he means that the equipment budget has had a negative impact on MoD’s frontline reserves in Wales.

Susan Elan Jones: Yes.

John Whalley: Again, because I am not involved in that aspect, I cannot comment on that.

Q76 Susan Elan Jones: Would any other colleagues like to have a word on it?

Peter White: No comment.

Roland Howell: No comment.

Q77 Chair: Just to round off that series of questions, are there any projects that are currently being undertaken in Wales, or likely to be undertaken in Wales, that could become threatened if the National Audit Office is correct in saying that there is a huge black hole in the defence procurement budget?

Roland Howell: In terms of Raytheon’s work, we have mentioned the Sentinel programme. We have a surety now on the Broughton site as a result of the Shadow contract. As well as the long-term support arrangement, we are also in the process of expanding and upgrading that fleet to a Mark 2 standard. The benefit of a Sentinel extension is that it will bring additional work and support our aspiration in terms of what we see as an ISR hub at Broughton that could be expanded to additional fleets. While it will not stop the work at Broughton and it won’t affect the long-term future supported by Shadow, it will be an opportunity missed in terms of further growth if the Sentinel platform is not extended.

Peter White: It is difficult. We are present on Ajax, Astute submarines, all of the frontline fighter aircraft and JSFs, so we have a presence across most of the UK’s platforms. In my experience, the big platforms—the carriers, Ajax and the fighters—get through untouched and it is the small programmes that tend to suffer. It is equipping the dismounted soldier, which is where quite a significant part of our capability is. If that gets cut or delayed by a few years, it can have an impact on business. It is difficult to guess or second guess where the shortfall will be funded from, but it will mean paying somewhere.

John Whalley: The short answer to your question is no, but given that we do not know what is going to happen over the next two to three years in terms of the UK economy, Governments and so on, a sudden shift in defence spending with savage cuts would inevitably impact on some of



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the key players like Raytheon, for example, if those programmes were to be cut.

- Q78 **Guto Bebb:** Just to follow up, you highlighted Ajax as being a large platform and a huge expense within the MoD at this point in time and in which you have an involvement. Has there been any change to the scheduled work on Ajax at this point in time?

Peter White: At the moment, no change. They are growing, and with JSF as an international platform, there is some protection there.

- Q79 **Jonathan Edwards:** What is your view on the MoD expenditure on the sector across the UK and how does Wales compare?

John Whalley: If we take the Philip Dunne report as a good yardstick, I think that Wales does pretty well against many of the English regions, in terms of population and spend, and Scotland and Northern Ireland. The big areas where we are outgunned are in the south-west and south-east of England. There is clearly an opportunity to redistribute, potentially over a longer term, some of that cake, but it would mean potentially perhaps drawing something out of the south-east and south-west.

Another approach is through increasing exports, and I know that is a very controversial area, choosing who we are going to export to. Companies like Raytheon in particular have ambitions to export their kit to other countries. The support by MoD, as has always been the case, is often a very good underwriting of such a product. Another way of growing is through the export market.

- Q80 **Jonathan Edwards:** There is a fair bit of disparity, isn't there? If you look at the figures that I have here, the expenditure in the south-west was around £5 billion.

John Whalley: It is very significant, yes.

- Q81 **Jonathan Edwards:** £4.3 billion in the south-east. Wales is just short of a billion. The north-east of England is £100 million. Why is there that huge disparity? Is it because that is where the companies are located? How would you go about redistributing that?

John Whalley: A lot of it is down to historical placement of key facilities. Around the south-west, for example, you have a lot of marine and naval facilities, which you do not tend to see elsewhere in the UK. There is a very strong cluster there. Clearly those decisions to disperse the industry taken 100 years ago, 70 years ago, 50 years ago, were done as part of a national policy, albeit in a war situation. With a proper economic strategy and plan, one could see over a longer period of time trying to rebalance the economy between those areas that are effectively overheating and those that are still facing huge employment challenges, like Wales.

Jonathan Edwards: Mr Whalley has already answered the question on the internal Welsh context. Thank you.



Q82 **Jack Lopresti:** Could you briefly describe the current process for bidding for contracts and comment on how effective you believe that process is?

John Whalley: I will defer to these two guys first.

Roland Howell: Our contracts tend to be more complex and longer term. Certainly the experience we have had with the Shadow programme is that close working, collaboration, understanding what the criteria are, focusing on affordability and value for money and understanding the profile of the programme makes it as efficient as possible; that works quite well. We have had a very open dialogue with DE&S and air capability, sometimes forming the bridge between those two in terms of having a cohesive strategy across air, DE&S and industry in order to deliver what is required. For us, it has worked quite well. On occasion, it can take more administration than we would perhaps like, and things can sometimes take a little longer, but in the main, in terms of the types of contracts that we execute, it has been very effective. A key feature is the collaboration and working together with DE&S and air capability.

Peter White: We probably have more competitions than Raytheon. We make equipment such as night vision goggles, thermal weapon sights or fused weapon sights—all sorts of equipment. They take about two years to design and develop. This is where I come back to the point on the strategy. If we know there is a requirement coming and we can anticipate, we can have equipment ready, because DE&S tends to want to buy a finished item rather than a drawing. If you can anticipate and understand what is coming, you can make your own investment as a company and have a product ready for the competition. If you wait for the competition to be announced, you are normally going to miss it. That is where having some signposts or a roadmap of what is coming allows us to compete.

When DE&S buys, it is a very transparent, fair and open process, and the competition is global. There is no bias towards UK industry. The best product will win the competition—back to value for money, performance, reliability, all of those criteria. But you have to have a product, and for that you have to have started running before the race is announced.

John Whalley: It comes back to this idea that we talked about earlier on of having perhaps a stronger Defence Growth Partnership, and much greater visibility of what our defence strategy is, so that there is much more advanced warning of what might be coming up.

Peter White: I am not sure that we need a partnership. I know what the US is thinking for its next innovation product, because when you go to the international conferences, they proudly tell you the direction of travel. All industry can listen. All industry gets the heads-up, so it is transparent. We don't do that as a nation, and therefore when the competitions are announced, you have to have somehow had advanced notice. That would be beneficial.



Q83 Susan Elan Jones: You say we do not do this as a nation. I do not disagree with you on that, but why do you think that is?

Peter White: People do things in different ways. I think that it is the way we have always done things. USSOCOM special forces is different from the US Army, and USSOCOM wants the best equipment for its people, full stop. It encourages a different acquisition model. They welcome technical refresh and technical innovation, and that is so vital. If you are doing an aircraft light weighting, there is a gestation period. Eurofighter has been working on it for many, many years. Eurofighter is not as modern as we necessarily think. Think of your mobile phone; think how often that changes and evolves, and that is the equipment that we should be giving to the dismounted soldier. It needs to be better than the equipment of the soldiers he is facing across the battlefield. It needs to be better than the ones they have, and to do that we need to be agile. That is an area that we could all do better with.

Q84 Jack Lopresti: I just want to go back to the Dunne report, which criticised the current procurement process as being too daunting. Would you say that has any resonance as far as you are concerned?

John Whalley: These two guys seem to find it not too daunting, but if I take a broader sample, I think that some companies do. That is not something that is peculiar to MoD; that is peculiar or shared across big organisations. Big organisations naturally tend to be far more bureaucratic than small organisations, which do things simply. Once you recognise that and you get into again this collaborative model that we talked about earlier on and say, "Is there a better way of doing this?", then I think you can make progress.

Chair: Can I interject here?

Jack Lopresti: I have one more, Chair, but you can come in here.

Q85 Chair: I suspect my colleague might be able to answer this as well as anyone here. Mr White and Mr Howell, you are quite big companies. I have been approached by two companies in my constituency that were seeking defence contracts and both found it very, very difficult. In your case, because what you both do is very specialised, to what extent does the MoD come to you and say, "We need Raytheon or Qioptiq to do this, to come up with this"? They are coming to you, whereas companies that have a service that might be useful further down the supply chain say to me that they find it very difficult to even knock at the right door, let alone get that door to be opened to them.

Peter White: Sometimes DE&S will encourage the smaller companies to come and talk to us. "Go and talk to Qioptiq, because there is something here we would like, and they will help you". We are perhaps somewhere between Raytheon and the small companies. We understand the process. Once you have done it a few times, it is like any process; once you understand how, it is not as daunting as it might first appear. We have led smaller consortiums, especially on technology, where we will work



with a small company to help them and work together to give the customer something that it needs. I think that is to everybody's advantage. It works well for DE&S, for us and for the smaller companies.

John Whalley: If I compare with a commercial aircraft business, the same challenge applies to Airbus. Smaller companies often come to us and say, "How can I do business with Airbus?" The answer is you can't. You will not be able to get in. You will not be able to find the right door. By working in partnership with a big company or a bigger company in their supply chain, you will be able to get access. The only way you will get into Airbus other than that is to have something niche that Airbus cannot get from anywhere else. The same applies to MoD. It is a good point by Peter that working in partnership, in collaboration, is a good way to get into that business. For smaller companies, it is very daunting.

Q86 **Guto Bebb:** I just wanted to follow up on a comment made by Mr White, and then we will come back to Jack, who was asking the questions.

I was interested in the comment you made about the fact that the amount of information and the indication of direction of travel that you get from, for example, the US forces is significantly more than you get from the MoD here in the United Kingdom. Do you think that you end up providing our forces with an off-the-shelf solution that is not the optimal solution that you could have provided if there was more information made available to you at the outset? You are implying that the way you would like to work is to develop a product that would meet the expectations of the MoD, but if you are not informed of what the expectations are, I fail to see how you can provide them with the exact thing that they were looking for, if you see my point.

Peter White: I follow the point. In our domain, we have a good relationship with some of the users and with DE&S, and the last contract we had from DE&S was to design, develop, and trial with the user, and then produce. The equipment that came out of that proved the point. It is probably a world-beating product and the US is trialling it at the moment. That has potential for export. If we work together and can find a way of doing that scenario, then we as a nation can do something better. It is good for industry and it is good for export if we do it together. The user has to be in there as well, because the people writing the requirements do not always know what the user really wants.

Q87 **Guto Bebb:** Just to finish, the experience that you have just outlined is not in your view typical of the way things are done by the MoD?

Peter White: Not typical.

Q88 **Jack Lopresti:** I have a broader question. Do you think the correct balance is struck between protecting our own sovereign defence capability and buying stuff, which is not always made in the UK, to provide our people with the best possible kit?



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Peter White: That is an interesting one. Competition has to be open, transparent and fair, and I think that the user deserves the best equipment. There is a "but". The "but" is if we want an indigenous capability. During the Gulf conflicts and the urgent operational requirements that came out of it, I think that the UK was glad it had a sovereign capability. You cannot have everything, and somehow there is not enough to go around. I think that competition is fair. It drives us to perform to the best of our ability, but a little bit of favouritism would not go amiss either, if I was honest.

John Whalley: It is a difficult one. The recent Wedgetail procurement was one that came on to the table. It is a difficult decision. Wedgetail is essentially a proven product. Airbus and Saab were looking at something that had a degree of provenness, potentially posed greater risks, but also gave a better return, I think, to UK industry. In that case, we perhaps left it too late effectively to replace the AWACS aircraft, so we were out of scope for maybe considering another way of doing it. I think that is the lesson from that particular exercise.

Roland Howell: From our perspective, it is slightly different. We are a good example of how we have brought technology from outside the UK. If you think of the original Sentinel programme, it generated that capability and transferred that design authority and responsibility so it is a UK capability. That activity then gave us the capability to develop the Shadow programme from scratch. Both of those are now UK capabilities. I would also add, particularly in terms of the Shadow programme and the Mark 2, which I mentioned, a chief feature of that is to develop agility and modularity, which gives us the ability to, while maintaining the platform with minimum interference, upgrade the systems and give yourself the widest choice, in terms of being a system agnostic platform.

John Whalley: If we look at aerospace and defence companies in Wales, something like eight out of the top 10 in the world have a presence in Wales. That is pretty formidable. If you look at the top 100, it is less striking, but certainly within the top 10 we have most of those companies.

The one big exception is Boeing. We spend a lot of money as a country with Boeing. I know for Boeing there is industrial participation in other parts of the UK, but we get precious little in Wales. If there is one appeal I could make it is that when we are doing business with Boeing, can we try to get more of that business into Wales? I think that Raytheon is an exemplary example of working with a US defence company with a real UK capability.

Peter White: One final observation: we bid in a lot of international programmes. Some of those are harder to win because we are British and not an indigenous provider in those countries. Many of the countries we are bidding into have a higher hurdle for indigenous content than the UK seems to have.



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- Q89 **Guto Bebb:** Mr Whalley, you highlighted the Wedgetail as an example of a procurement where the actual expectations or the needs of the MoD were communicated late in the day, and as a result perhaps there was a loss of opportunity for UK industry to provide a solution that would have been as good—even better, perhaps—than what Boeing was offering. Are there any current procurement programmes then that you are aware of that in your view offer opportunities for Welsh companies? Do you think that lessons have been learned as a result of the Wedgetail programme?

John Whalley: The answer to that question is no, but I will have a very good look after I have left this meeting.

- Q90 **Guto Bebb:** Okay. Are the other two companies aware of any?

Roland Howell: I would say that Raytheon has an aspiration to expand what we have created, this ISR hub at Broughton, and there are opportunities in terms of other platforms in the ISR sphere that are coming up for competition. There are opportunities—you mentioned Boeing—to use the capability we have in Broughton to provide support or aspects that deliver parts of those programmes. We would look to the Welsh and UK Governments to support us in growing and developing what is a fantastic capability that has been implemented in Broughton.

- Q91 **Guto Bebb:** Do you think that you are sufficiently sighted in relation to some of those opportunities to take advantage early enough?

Roland Howell: Yes, I think that we are.

- Q92 **Guto Bebb:** The final question is just out of my personal interest more than anything else. Obviously one of the big procurements going through the MoD at this point in time is the Boxer programme. I understand that there were two roadshows in south Wales as part of the opportunity for suppliers and possible subcontractors to be aware of the opportunities within that programme. Are you aware of the development of that programme and any successful opportunities that have been created for Welsh businesses?

John Whalley: We are aware of that programme. In fact, the Welsh Government, I think working with Rheinmetall, have run supplier workshops in south Wales. I don't know the degree of success in terms of signing people up for that programme.

- Q93 **Guto Bebb:** Can I just comment on that? You highlight the fact that there were supplier workshops. Were those supplier workshops undertaken by the Welsh Government, or was that MoD and Welsh Government working in tandem?

John Whalley: I think that it was largely in partnership with the Welsh Government.

Guto Bebb: That is interesting. Thank you.

John Whalley: On that, in fact, I would like to commend Raytheon as well. We talked about trying to encourage SMEs to get into the business.



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I think two or three years ago now, Roland, we ran a workshop in partnership with Raytheon, the forum, the electronics forum in Wales and the Welsh Government, to look for potential suppliers to your programmes locally, and we did sign some up.

Roland Howell: Yes, we did.

John Whalley: A couple of them recently have won awards as suppliers to Raytheon. We have had a supplier day with Qioptiq and a space supplier day with Airbus recently. We are trying to encourage other companies like BAE to run something similar at their Glascoed facility. We are trying, as a team, to get better access to the SME companies.

Q94 **Guto Bebb:** This takes me back to my first question, which is the extent to which you are being supported by the Welsh Government. In terms of some of these supplier days, is the Welsh Government's Department for the Economy fully involved with these?

John Whalley: Absolutely.

Q95 **Chair:** I gave two of you a sneak preview of this question earlier on. On the issue of apprenticeships, do you find it better to employ people who have a degree, or who come to you as apprentices? Or do you like degree apprenticeships? What is the model that works best for your industry?

Roland Howell: Our experience has been that we started our apprenticeship scheme about five years ago, focused primarily on aircraft engineering, structural and electrical, and that has worked pretty well. We take on about six to 10 apprentices per year. As I say, it has been running for about four to five years, we have retained all of those apprentices, and those who have completed it are skilled workers now who are doing work on the shop floor. We are expanding that to other functions, but in parallel with that, we have always maintained a graduate recruitment in terms of some of the design engineering and broader skills.

I would also add that one of the things that has helped with the apprentice programme is that we have done transfers. We have worked with Airbus, for example, and swapped over apprentices and given Airbus apprentices the chance to experience a different environment, and equally for our apprentices to go there. We have not implemented it yet, but we are at the start of looking at how we do that same kind of work with our supply base to extend that apprenticeship scheme. The answer to your question is that I think it is about a balance across our portfolio.

Q96 **Chair:** Mr White, what about yourself? Do you have apprentices?

Peter White: We have an apprentice programme. We typically take five apprentices a year. That is rolling, and I think we have reached 250 cumulatively so far, so we have a good continuous apprentice programme. We tend to retain the apprentices. Some of them then work 40 years and retire, so kind of all the way through life. We also bring in



people at graduate and MSc level, and we find we then train the MScs to do the kinds of disciplines we need. Optical engineering is an unusual element of design. There is no longer an optical degree course in the UK—there used to be at Imperial College—so we have to train our own designers. If you have the people to do the training it is great, but if ever we let the pot run dry, it will be very hard to start again, so we have a continuous stream of developing talent.

Q97 Chair: Mr Whalley, if you were talking to an 18 year-old who wanted to go into the defence industry, what would you tell them? Would your advice be to get a good apprenticeship with a recognised company, or to go and do a degree and, if so, what sort of degree?

John Whalley: I think that it is very much down to the individual. If you look at Airbus, for example, I think they took on 140 apprentices last year and 10 graduates at Broughton. Even for that company, there is a clear balance towards the apprenticeship. I know that a lot of people at Broughton have told me that in a manufacturing environment, having the practical experience at an early age is very important; they can then build up the academic skills later in their career. It would very much depend upon the individual. My own background is I did a degree, but it was a sandwich degree course. I did essentially a three-year degree that was compressed into two years, and then the other two years were spent in industry.

Q98 Chair: Isn't that rather similar in some respects to the degree apprenticeship that some companies are now offering?

John Whalley: Absolutely, and that is where its origins are. A mixture of practical, hands-on experience and academic training is vital. How you do that—

Q99 Chair: Can I push you slightly further and suggest that for a career in aerospace, defence or high-tech manufacturing, possibly it would be better to go for a very good, high-level apprenticeship scheme, a degree-style scheme, than simply an academic degree for three years and then try to get into the industry?

John Whalley: For careers that are closely related to manufacturing, yes. If you are going to be in a career that is at the more esoteric end of aerodynamics, for example, then you may just want to do the academic side. Certainly if you are close to manufacturing, I think that some sort of apprenticeship training is important.

Peter White: Just to add to that, in our industry we started primarily in optics. I think that electronics is becoming more and more important, as is image processing, image recognition, all of the clever aspects. Those are the skills that are massively in demand. If my son was at the age where I could influence him again, I would say go for that. The electronics is the shortage I know that Thales—

Chair: By that you mean a degree in—



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Peter White: You need a degree in image processing, electronics or algorithms—the things I do not understand. The youngsters coming into the industry are already coming in with knowledge, which means they go faster than the people we have had working for 15 years, who we regard as talented. I think that for youngsters coming out of university you need a mix. You need a balance, and you should not have one or the other.

Q100 **Chair:** This is very interesting. It takes us slightly away from defence, but I would not know which degrees are in demand from industry and which are not at the moment. I could hazard a guess perhaps, but until you said it to me. I would not have automatically known until just now that there is a huge shortage of people with degrees in electronics. Is that information out there somewhere?

Peter White: Yes. I remember reading an article from Cardiff—I think it was online—saying, “We are paying London City prices and we still cannot hire engineers.” On certain aspects of software engineering, I know Thales in Glasgow and Leonardo in Edinburgh are fighting backwards and forwards for those people.

Q101 **Chair:** How does an 18-year-old know that these are things that they should be studying if they want to walk straight into a well-paid job?

Peter White: I don’t know.

Chair: Anyway, sorry, that is not a question for you.

John Whalley: That is part of the challenge, Chair. When I was a lad, even then there was probably a lot less choice than there is now for young people coming through the system. In 20 years’ time, so if they are coming into primary school now, who knows what the world is going to be like in 20 years? Where I think we have to get smarter is across the whole STEM agenda, and engaging with parents and primary school kids as well as secondary school kids to give them an understanding of the capabilities of technology.

Q102 **Susan Elan Jones:** I am finding all this fascinating. We all know in north-east Wales that it is really competitive to get on those Airbus apprenticeships. It is just interesting to hear that. I wonder if certainly there is some food for thought here, in terms of careers education and how we provide that information for school students and the like. But that is not my question on the list, as it were.

I was going to ask about the defence industry’s contribution to Wales. It is important for the economy, but what benefits do you also bring to the economy and society of the areas that you operate in, and to Wales as a whole? Then I have a little follow-up for Mr White and Mr Howell.

John Whalley: Again, these two guys should perhaps talk for their specific geographical areas.

Roland Howell: Sure. From our own perspective in terms of numbers, we contribute about £14 million a year to the economy. We have



approximately 90-odd suppliers in Wales and we, as I mentioned, run the apprenticeship scheme working with Deeside College. We run a lot of STEM activities. We run the Quadcopter Challenge. In fact, on Sunday I was at RAF Cosford with Air Marshal Julian Young, giving a prize to an air cadets group from Mold who won the RAF engineering challenge for last year, and launching this year's competition, which we sponsored. I think that describes our contribution.

Peter White: It is always difficult to quantify. We spend a significant amount of money in wages in the economy. They are probably highly paid wages for the area, so that is put back into the environment. We sponsor Team Army, so we put money back into the armed force community. We are a silver armed forces covenant organisation. We do things with interns, we do things with apprentices, and we support local hospices and local charities. We put back. We have a service day where people are encouraged to go and do work for the community and the company pays. If we could get the whole factory out doing things, we would. It is putting something back into the environment.

John Whalley: I think that both companies are also part of larger clusters. In the case of Raytheon, you are right next door to Airbus. You have people like Aerocare and Morson Projects. You have DECA just down the road. There is an exchange of people between these businesses and the impact of that total cluster on the local area is quite remarkable. We talked about apprenticeship versus degree. I seem to remember that Flintshire had one of the lowest take-ups of places at university in engineering because they were all going into places like Airbus, for example.

Q103 **Guto Bebb:** That was the question I was going to ask, because you mentioned Julian Young. Obviously he has been very much involved with the successful bids for work for DECA Sealand, and DECA Sealand has a fantastic apprenticeship scheme as well, working with Coleg Cambria. I am sure you all work with Coleg Cambria as well. The only question I was going to ask is do you think that there is a point at which you are running out of applicable apprenticeships or individuals to take up those opportunities?

John Whalley: I think that there are some real hotspots in Wales and the whole Flintshire area around Deeside is one of those hotspots. Going back about 18 months now, one of the senior training guys in Airbus came to us and said, "We are still getting huge competition for places in Airbus, but we notice that the numbers coming through are falling, and we may get to the point where we will not get the quality that we are looking for".

We are trying to tackle this problem across Wales. For example, ICAT in south Wales at Cardiff Airport, which is the International Centre for Aerospace Training—they train aircraft maintenance engineers—is looking now to rebuild a new, advanced manufacturing campus next to the



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airport, which will be twice as big as the current ICAT because the demand is seen to be increasing in line with that need.

If I go further west to RAF Valley, which is in a very different area from an economic and population point of view, they have heavily relied on drawing ex-air force people in as they have retired to do a second career, if you like, within a civilian job at Valley. That source is drying up, so people like Babcock have been working very closely with Coleg Menai to try to improve the throughput of younger people coming into the employment market with engineering capability.

- Q104 **Guto Bebb:** The follow-up question—and this is very selfish from my perspective, but I am the MP for Aberconwy—is you can be in some of your establishments in anything between 20 and 40 minutes and you have highlighted that there are hotspots. Do you think that the local authorities in north Wales are working coherently together to try to ensure that the opportunity, whether it is in Valley or whether it is in Airbus, is there for people from across north Wales? Do you think that message has been conveyed?

John Whalley: I think it is. The North Wales Economic Ambition Board tries to bring the counties of north Wales together. Whether we are doing enough, I don't know. I would welcome your feedback on that. I keep stressing collaboration; please talk to me.

- Q105 **Susan Elan Jones:** You have mentioned collaboration a lot. Could I ask about the supply chain—and I know you have touched on that—in terms of the extent to which you use local companies? I appreciate that it may not always be possible, but I would be interested in a word from each of you on that.

Roland Howell: As I mentioned, we have about 90 suppliers in Wales, quite a diverse supply chain, and we work very closely. Some are on the airfield at Broughton and some are more widely dispersed, and we work very closely with them. In fact, we supported very recently the supplier forum sponsored by MinDP at Broughton, and we also run what we call the SpaRk initiative, which is an opportunity for smaller suppliers to propose programmes that they are looking for some investment in, in which we select one. It is about 50K, but it is a seed fund type activity and we carry that out as well.

Peter White: We try to use the local supply chain. As John mentioned, we had a supply chain open day as part of one of the contracts we won to try to get people involved. There is a difficulty in qualifying new suppliers. If you work on programmes and you have a qualified supply chain, moving them can be difficult. It does not happen overnight, you have to work at it, and that is two-way. We need to be looking and hungry and our suppliers need to be hungry as well. From that supply chain day, we have picked up a few new suppliers and that is fantastic.

John Whalley: In answer to your question, we need to do more on it.



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Q106 **Ben Lake:** In answering earlier questions, I think that you have all touched upon some of the links or contacts that the industry has with the Welsh Government. Could I ask you to summarise what kind of input the Welsh Government do have into the development of the defence industry in Wales and perhaps describe what sort of relationship you have with them?

John Whalley: Can I take it from the forum point of view and then maybe look at it from a company point of view? The forum was set up in 2001 with the backing of the Welsh Government. Right from the start we had the Welsh Development Agency in those days. The Economic and Transport Ministry within the Welsh Government works very closely with us. Tomorrow I am speaking at an event being run by ADS, the national UK trade association, down at General Dynamics. I will be speaking. A guy called Dickie Davis, who you may have come across, a Deputy Director from the Welsh Government, will be speaking there as well. We personally work very closely together. He wanted to be here today to pass me notes from the back, but he was advised by a senior civil servant that that would not be appropriate because I am supposed to be the voice of industry. In reality, industry and Government do work very closely together; we have to.

Q107 **Ben Lake:** Mr White and Mr Howell, do you have any discussions with Welsh Government during bidding processes or procurement processes?

Roland Howell: We have regular engagements to keep Welsh Government and Westminster Government apprised of what we are doing on the strategy. I would highlight the point that as we worked up towards the Shadow award part of that, in the 18 months to two years lead-up to that was the Welsh Government grant, which we were lucky to receive, and we matched that investment. That was one of the factors in developing that capability that was relevant in us securing that 10-year contract at Broughton and also enabling us to bring Sentinel work in terms of maintenance activity to Broughton.

Peter White: We were pursuing a major programme called STA support and we signed the contract at the beginning of 2017 for £82 million for the first five years with a five-year option. Instrumental in that, we needed Welsh Government support, so Dickie Davis, who John just mentioned, sat with one of the key customers and basically said, "If I was you, I would give Qioptiq the contract". He wrote a letter of support, which was part of our bid. That was important, because we needed a new building as part of delivering the programme. The Welsh Government committed that if we won they would build us a facility adjacent to our factory. We would then lease it from them so that they get their return and that was one of the key planks of our bid. We won the programme. The Welsh Government support was absolutely fantastic.

Q108 **Guto Bebb:** There is a follow-up to that. I will be honest: I think that the relationship between Welsh Government and the industry is an exemplar of how things should work. Mr Whalley, you were saying to me that the



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organisation that you front was initially established by the WDA before then being subsumed into, or supported by, the Welsh Government's Department for the Economy. This is an example, in my view, of how Government should support industry. Do you think this is an exception, in terms of the way in which Welsh Government support the defence industry, because of the fact that this organisation was established previously, or do you think that this best practice is being transferred to other elements of Welsh Government? I am not asking the companies to answer, because that is a political question, but do you think this is an exemplar that is now being followed in other areas?

John Whalley: For example, there are two other forums that work very closely with the Welsh Government. One is ESTnet, which is the Electronics and Software Technology Network, and the other one—which is very much in the news at the moment for the wrong reasons—is the Welsh Automotive Forum. They will be working very closely on the ground together to address some of the issues that arise out of the Ford closure announced recently.

There is an umbrella organisation now that sits over all three of those forums called Industry Wales, which was set up about five years ago. That also works very closely with the Welsh Government and the idea is to try to extend beyond those three historical forums, which have been around for 20 years or so, to cover several thousand more companies that spread across manufacturing in Wales.

One area where we have had a degree of success working with what I call Team Wales is in the rail industry. For example, we were successful in winning the CAF factory in south Wales. We did not win the TALGO in north Wales, which is unfortunate, but we have seen now some of my aerospace companies bidding into and winning work in the rail sector. There is an attempt by Welsh Government to straddle the whole of manufacturing industry by working in partnership with the existing forums and also Industry Wales, our umbrella organisation.

Q109 **Chair:** Thank you very much indeed, all three of you, for coming along and giving such detailed evidence today. It has been a pleasure to meet you and I hope certainly that we continue to see Wales being a success when it comes to the defence industry. Diolch yn fawr iawn.

John Whalley: Aerospace Wales regards itself as part of Team Wales. You are part of Team Wales as well, so I look forward to getting contacts from you to see how we can work together for the benefit of our wonderful nation.