

# More bang for the buck

How we can get better value from the defence budget

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FOREWORD BY LORD GUTHRIE



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## **FOREWORD**

This paper is an alarm call.

It should make everyone in the Ministry of Defence realise that they cannot go on as they are. The shameful waste and delay which characterise the sorry history of equipment procurement should never have been tolerated. In the past, such indulgence was wrong. Now it is both wrong and unaffordable.

The huge government budget deficit is going to require great sacrifice on the part of the taxpayer. Defence spending, already too low for the commitments being asked of our Armed Forces, is going to come under even greater pressure. It is crucial therefore that we squeeze as much value as possible from every pound we spend on kit.

23,000 people are employed in Defence Equipment and Support. Yet all too often our Armed Forces have to put up with substandard equipment. Yes, the Government may have finally released the funds to pay for helicopters and equipment so urgently needed in Afghanistan. Yes, the Urgent Operational Requirement scheme is at last getting the right equipment to the front line. But it has taken seven years to do so. World War II was over in less time than that.

It may be right, as the Government has just announced, to pay for the equipment that is needed by raiding military budgets elsewhere. But that can only be a short-term measure.

No. The time for a hard-nosed attitude to defence procurement has come. The cosy arrangements with the big contractors must cease. And the detailed recommendations put forward both here and in the Gray Review must be implemented.

The Ministry of Defence claims that it recognises that the world has changed and that a new approach is required to Defence Equipment, Procurement and Support. Any number of studies have reported and made recommendations. But too often they have met with resistance from vested interests from both the MoD and the defence industry, and excuses found which lead to the shelving of new ideas which would be appropriate to our new circumstances.

That is no longer acceptable.

To quote Churchill: "Action this day". Not "keep bugging on".

Lord Guthrie  
December 2009

## SUMMARY

- Defence expenditure is under severe pressure: equipment costs are rising faster than inflation; spending on defence over the last 12 years has not matched the demands made on our Armed Forces; and the current equipment programme is underfunded by £35 billion.
- Both of the main political parties have promised a Strategic Defence Review. Neither, however, has promised to protect the defence budget. Indeed, the depth of the economic crisis is such that significant additional funding for defence is unlikely.
- Therefore the Ministry of Defence must do far more with what it receives. In particular, it must demonstrate that it can deliver better value for money in defence procurement.
- 23,000 people are employed at the MoD's Defence Equipment and Support. The total number of serving personnel in the Army, Navy and Air Force is in the region of 225,000 (including reserve forces).
- The recent Gray Review has proposed numerous sensible recommendations on how to improve defence procurement. These should be implemented. However, three additional guiding principles which must govern decision making:

- the limits of EU collaboration must be recognised. It is wrong to assume (as many do) that more EU collaboration will lead to better defence procurement.
  - the process of defining what will be bought from the UK defence industry, and what will not, must be completed. The prime considerations must be military effectiveness, operational sovereignty and value for money – not the impact on “jobs”.
  - the “conspiracy of optimism” between the Ministry of Defence and the defence industry must end. Far more effort must be placed on identifying and addressing the risk elements involved in commissioning major projects.
- Efficient procurement is possible. The experience of the “Urgent Operational Requirement” scheme shows that, by accepting limited (but realistic) ambitions, it is possible to supply good equipment quickly and cost-effectively. Similarly Australia has faced, and has responded to, many of the same problems as the UK.
  - Procurement mistakes should not go unpunished. In the US, when a programme breaches its cost ceilings, the Department of Defense must testify before Congress. A similar procedure should be adopted here by the Defence Select Committee.
  - In addition, the MoD should be far more challenging towards its main contractors. The SME sector can, in many cases, provide more innovation and better value for money.
  - Deep and intelligent reform is the precondition for ensuring that defence spending is given the priority it deserves. Without it, at a time of economic hardship, public support for defence spending will surely wane.

# 1. INTRODUCTION

Both major political parties have promised a Strategic Defence Review (SDR) after the General Election. But whatever the results of the SDR, it will still be vital to provide our Armed Forces with good equipment. And that will, inevitably, be expensive.

Defence inflation has tended to rise much faster than consumer price increases for various reasons. For example, interoperability between allies' equipment is essential to maximise military effectiveness in NATO. Because of the high investment in defence equipment by the US, the technical standard that must be matched is being pushed ever higher.<sup>1</sup> In addition, the now constant criticism of inadequate vehicle protection, helicopter shortages and lack of surveillance drones in Afghanistan from coroners and from casualties' families amounts to a demand for more and better equipment. The political pressure to keep casualties at the lowest level possible leads to further demands on the equipment budget.

It is also clear that defence spending over the last 12 years has not kept pace with the increasing ambitions of our political leaders. As

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<sup>1</sup> The US spends more than twice that of all EU countries put together on defence. Its research and development element is even larger.

former Defence Secretary and NATO Secretary General Lord Robertson and former UN High Representative Lord Ashdown concluded in a recent analysis: “It is clear that there is a black hole in the defence budget”.<sup>2</sup>

So, whatever the decisions of the SDR, the defence budget is both too low and will face significant further pressures on costs. And yet, with the UK’s public finances under exceptional strain, there can be little expectation that the defence budget can be increased to match the demands that it will face. Indeed, in the December 2009 Pre Budget Report, defence was absent from the list of areas of public spending that are protected in 2011-2012 and 2012-2013 – despite a previous promise by Lord Mandelson that defence spending would not be cut.<sup>3</sup>

So more must be done with less. The waste and deep-rooted failures of the past must be addressed. As the Gray report on defence acquisition, commissioned from former MoD special adviser Bernard Gray by former Defence Secretary John Hutton before he left the Government, said:<sup>4</sup>

“Cutting back programmes could bring the Equipment Procurement Plan back into balance but this is likely to be temporary as there are serious and deep-rooted behavioural and organisational issues that will drive again towards unaffordability unless they can be dealt with.”

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<sup>2</sup> Institute for Public Policy Research, *Shared Responsibilities, A National Security Strategy for the UK*, June 2009.

<sup>3</sup> “Mandelson guards defence budget from cuts”, *The Financial Times*, 19 July 2009.

<sup>4</sup> B Gray, *Review of Acquisition for the Secretary of State for Defence*, MoD, October 2009. This review was conducted over six months to June 2009 by strategy consultants LEK with high level access to MoD data and over 200 discussions with the MoD itself, industry, other government departments, the defence departments of other major nations and with relevant commercial organisations.

The Gray report also rightly observed:

“The UK’s level of ambition around capability is significantly out of balance with the resources available on any realistic short, medium or long-term basis”.

It said the equipment programme was underfunded by nearly £35 billion and was running an average of five years behind schedule. An early draft of the Gray report posed the following questions:

“How can it be that it takes 20 years to build a ship, or aircraft, or tank? Why does it always seem to cost at least twice what was thought? Even worse, at the end of the wait, why does it never seem to do what it was supposed to?”

The next government must determine what it wants to do in defence. But given the history of failure, the big strategic decisions will need to be accompanied by a demonstration that taxpayers in future will get better value for money.

Of course, this will not be easy. Given the long history of procurement failures, there is a danger that many will conclude that arming the forces adequately is impossible. There has been repeated criticism of the MoD from the National Audit Office, serving and retired senior officers and the Defence Select Committee. In October 2009, the strongly worded conclusions of the Haddon-Cave report into the deaths of 14 airmen in an RAF Nimrod blamed not only the manufacturer, BAE Systems and Qinetiq, the safety adviser, but also two Chiefs of Defence Logistics for the pressure placed by a search for financial savings on the air safety regime.

This record of failure means that the public is very far from asking for more defence spending. Indeed, one YouGov poll in June 2009<sup>5</sup> put

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<sup>5</sup> Quoted in *The Daily Telegraph*, 16 September 2009.

defence at the top of voters' preferred list for cuts. Yet the furore over armoured vehicle and helicopter shortages suggests that the public do want troops in Iraq and Afghanistan better equipped.

The Conservatives have responded by promising a new Strategic Defence Review of their own, along with a capability review and reform of procurement. They have proposed that future equipment programmes would be tested against five criteria: capability, affordability, adaptability, interoperability and exportability; and that the acquisition process should meet four objectives.<sup>6</sup> These were: getting the best equipment to our armed forces when and where they need it at a reasonable cost to the taxpayer; using equipment procurement to underpin our strategic relationships; providing more stability to the Armed Forces and better predictability to the defence industry; and preserving UK jobs by maximising exports, and using defence exports as a foreign policy tool.

These proposals certainly provide a new framework. But they do not go far enough. For the history of defence acquisition has involved so many failures, that an even more hard-headed approach is needed.

The next Government must deliver better value. To do this, the MoD must implement the recommendations made in the Gray report. But it must do even more. In particular, it must have greater realism about the limits of European collaboration; it must finish the process of defining what will be bought from the UK defence industry, and what will not. And it must end the "conspiracy of optimism" between the MoD and the defence industry, which underlies so many procurement disasters. Only then will the public support continued investment in the equipment that our Armed Forces need.

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<sup>6</sup> See Dr Liam Fox MP, speech to Jane's UK Defence Equipment conference, 7 September 2009.

## 2. THREE GUIDING PRINCIPLES

### **The first guiding principle: the need for realism on EU collaboration**

European collaboration to develop and produce defence equipment is still being advocated, by some, as a way to make the UK defence budget go further. Because Europe's armies together number two million more than those of the US, it naturally appears that European co-operation in defence should be extended.

That was the thinking behind Tony Blair's St Malo agreement with France of 1998, which pledged the UK to work towards the European Rapid Reaction Force. The force would be capable, it was declared, of meeting the Helsinki goals of about 50,000 to 60,000 troops, deployable within 60 days and sustainable in the field for a year. The consequent requirement for interoperability among European forces led to a "Europe first" policy in procurement. Now, looking towards the next SDR, Lords Ashdown and Robertson argue for "investing political capital, diplomatic effort and financial resources in the European Defence and Security Policy."<sup>7</sup>

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<sup>7</sup> IPPR, *op. cit.*

However, this is simply wrong. Greater EU co-operation in defence is not the answer to defence procurement problems. The experience of programmes such as the Eurofighter Typhoon, Airbus A400M and PAAMS anti-aircraft missile, to name but three, have shown the limits of the potential for co-operation. Collaboration on smaller programmes, such as munitions, can on occasion be manageable. But as Sir Bill Jeffrey, the Permanent Under Secretary for Defence, told the Commons Public Accounts Committee in January 2009:

“Sometimes in big programmes, especially if there are two or even three countries involved, the thing can move little better than the pace of the slowest.”

A prime example of a programme in which the partners were committed to significant spending, but there was a poor outcome nonetheless, is the Eurofighter Typhoon aircraft, a collaboration between Britain, Germany, Italy and Spain. By the time its costs had reached £20 billion, they were estimated by one expert at twice what they would have been if European collaboration had been avoided.<sup>8</sup> Though the aircraft is now more of a technical success than earlier, and much of the UK's third tranche is being sold on to Saudi Arabia, the result even so is waste of public money on an appalling scale.

Similarly, because of continuing delays to the £17 billion Airbus A400M military transport plane, blamed by the manufacturing consortium on the politics of collaboration, British troops in Afghanistan have been risking their lives in ageing Hercules aircraft for much longer than planned. The aircraft is already four years late and perhaps £850 million over budget. Painful negotiations between member states about the project's future are continuing. But it has long been clear that buying US C-17 aircraft off

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<sup>8</sup> Professor Keith Hartley, quoted in *The Best Kit*, Policy Exchange, 2004.

the shelf would have met the requirement far better and may be necessary in any case because of the delays.<sup>9</sup>

More recently, the Public Accounts Committee dubbed the failure of the Type 45 destroyer to reach full operational capability until 2011 “a disgrace”. The destroyer will enter service this year without its anti-aircraft missile system having been test-fired *in situ* in part because of the problem of co-ordinating the different European companies involved. Overall, the ships are two years late and £1.5 billion over their original budget – or arguably much longer overdue, at greater cost, if the original collaborative plans for a NATO Frigate Replacement for the 90s and the subsequent Horizon programme are considered.

### ***The EU defence industry: facts and figures***

Two of the main reasons why EU co-operation on defence procurement is unlikely to succeed is because European military spending is so low; and because the European industrial base is so fragmented.<sup>10</sup>

The UK’s defence budget for 2008/9 is, at £38 billion, or around 2.3% of GDP, the lowest since the 1930s despite the Iraq and Afghanistan commitments. However, this figure is still high compared to the rest of Europe. France spends 2.2% and Germany and Italy, along with most other European nations, less than 2%. In comparison, the US spends more than 4%, China 2% (officially, but in reality more), and Russia 2.6%. Most EU countries’ long-term average for defence spending as a proportion of GDP is, with the exception of France, lower than Britain’s.

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<sup>9</sup> According to Jane’s, the C17s took five years to build compared to the 14 years so far for the A400M.

<sup>10</sup> The data in this section principally come from *Ever Closer Union – The Outlook for a European Defence Industrial Base*, Jane’s Industry Quarterly, July 2009.

In addition, the proportion of the UK defence budget devoted to equipment is larger than in all other European countries. Here, about 30% of the total, or £13 billion, goes in equipment buying and support. Because the other countries spend a higher proportion of what are in any case smaller defence budgets on personnel, they are being left even further behind by technological advance.

In 2009, the UK is expected to spend twice as much on equipment as France. Take out France from the figures, and the UK spends more than the rest of Europe put together. Germany's spending is less than a quarter of Britain's. Spain's is less than a seventh. Poland and Denmark, though valued contributors to Iraq and Afghanistan operations, spend less than a tenth of what Britain spends.

And these sums are falling. Overall defence spending of European nations is predicted to fall to \$303 billion in 2009, down from \$309 billion in 2008. Procurement budgets are expected to decrease by 4% in 2009 to \$53 billion. European research and development budgets have long been smaller than those of the US, limiting the ability of European forces to operate alongside the US and entrenching the American lead in many areas of military technology.

Furthermore, the leading role played by the US in the Iraq and Afghan wars will drive its expertise ahead of non-combatant nations and set demanding new standards for equipment. So, whatever the political case for commitment to European allies, the reality is that public spending pressures and lack of political will in most European countries make it even more difficult for them than it is for Britain to provide the required sums for high-tech warfare. While others spend so little on defence, European defence integration cannot be the answer for the UK.

The argument that European collaboration can create economies of scale and so make defence equipment affordable, put most recently in the Sharing Responsibility document,<sup>11</sup> must also be rebutted. It is true that stronger bilateral relationships in procurement might sometimes be welcome, notably with France, perhaps using the example of the NLAW light anti-armour weapon developed with Sweden. But as the Gray report observed:

“The criticism frequently directed at the “true” collaboration of the type entered into on the Typhoon project is that the approach is focused on sharing employment and expertise and appears, at least at first sight, to be far removed from one which aspires to minimise cost and maximise efficiency and military capability.”

The Gray team observed that some of the benefits of economies of scale can be gained without the risks by purchasing military off-the-shelf equipment, as recommended strongly in Australia’s Mortimer Review (see Chapter Eight). Britain cannot afford to get bogged down in multi-player collaborations which add complexity while contributing limited spending power. Indeed, the history of multi-billion pound cost overruns and delays on projects like the Eurofighter Typhoon and A400M transport aircraft demonstrate the danger of involvement in complex collaborations.<sup>12</sup>

It is necessary to realise how little scope there is here. There is no European single market for defence equipment. OCCAR, the Organisation Conjointe de Cooperation en Matière d’Armement, established by the UK, France, Germany and Italy in 1996, is not a fully fledged joint procurement agency because member states are not obliged to use it. At a time of recessionary pressures, it is hard to see member states forgoing the

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<sup>11</sup> IPPR, *op. cit.*

<sup>12</sup> These are examined in more detail in Chapter Three.

ability to direct defence spending towards their national champions, many of them still state-owned, whatever the free-market arguments. As a consequence, rationalisation in equipment buying and meaningful economies of scale will be impossible to achieve.

Nor will the EU Directive on Defence and Security Procurement have much impact. While this was intended to open up markets, detailed implementation will be left to member states. The defence industry is understandably sceptical of the Directive's impact. European governments do not possess "clear determination to let go of their desire to have a particular capability for their forces... the obvious benefits of scale that could be had have not been realised," commented the Director of Defence and Homeland Security, Derek Marshall, at the Society of British Aerospace Companies.<sup>13</sup>

### ***The US defence industry: facts and figures***

The European industrial base remains highly fragmented compared to that of the US: there are around 5,000 defence manufacturers here compared to 2,500 in the much larger US market. The demand for "offset" and "workshare" among individual countries' own suppliers also often erodes economies of scale.

US defence spending was already nearly three times the EU total around the time of 9/11. The growth in the US defence budget thereafter, particularly in research and development, left Europe far behind. The US now roughly spends almost as much on defence as the rest of the world put together. It is true that the outlook for US defence spending under President Obama is unclear, with zero budget growth expected from 2011 to 2015.<sup>14</sup> However, the chances of a significant absolute reduction

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<sup>13</sup> Quoted in *Ever Closer Union – The Outlook for a European Defence Industrial Base*, Jane's Industry Quarterly, July 2009.

<sup>14</sup> The Pentagon will present the Quadrennial Defence Review to Congress in early 2010.

in military expenditure by the US seem low, while many European countries' defence equipment spending is falling.

**The second guiding principle: keep the contribution of the UK defence industry in perspective**

The UK defence industry has disproportionate lobbying power. The industry has now shrunk to a size commensurate with the 2% or so of GDP spent on defence. Its proportion of total employment is smaller still (see below). Yet defence industry lobbyists still behave as though they represent a large tranche of the economy.

The great names of the British aircraft industry like Vickers, Hawker Siddeley, de Havilland, English Electric and Bristol played a key part in the defeat of Nazi Germany. However, nostalgia should not disguise the fact that post-war hopes of building on that advantage came to little. The de Havilland Comet, the world's first jet airliner, crashed and was abandoned. Missiles like Blue Streak and Skybolt were never produced in quantity. Cost over-runs and delays became commonplace.

By 1958, Ministry of Supply studies found actual costs of defence equipment were 2.8 times those forecast.<sup>15</sup> Rolls Royce survived receivership and nationalisation in 1971 to serve the civil market above all, making it one of the world's great engineering companies. BAE Systems, formerly British Aerospace, emerged from public ownership to become a major exporter. But its focus has switched to the US in recent years, becoming at one stage the fifth largest supplier to the Pentagon. The US now supplies the largest part of its revenues; the majority of its employees are overseas. The company's present importance to the UK economy, even though it is Europe's largest defence company, is often exaggerated.

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<sup>15</sup> B Kincaid, *Changing the Dinosaur's Spots – The Battle to Reform UK Defence Acquisition*, RUSI, 2008.

Three-quarters of UK defence industry output is accounted for by orders from the Ministry of Defence. The value of exports of defence equipment and services in 2007 was £5.5 billion, compared to total UK exports of £221 billion (2% of the total). A recent report commissioned by the industry places it 13th among sectors ranked by export performance. The defence sector is 15th largest in the UK by value added to GDP.<sup>16</sup>

The case is sometimes made that an extra £100 million spent on defence would have a high multiplier effect, because the supply chain is largely in the UK; and because defence industry wages are relatively high. However, the Oxford Economics study also shows the comparative strength of other industries. Banking and finance, for example, outrank defence in terms of tax contribution while pharmaceuticals outrank it by export performance and research and development intensity.

The dangers of this approach were exemplified in the Eurofighter project. Sir John Nott, defence secretary from 1981 to 1983, once said he kept the Eurofighter project alive because “if we didn’t do something to keep the design teams going at Warton (the British Aerospace facility in Lancashire) probably the military aircraft capability in this country was going to fold and I don’t think I wanted that to happen, because of jobs.”<sup>17</sup> He added: “I had closed down the Chatham dockyard and that had caused severe repercussions in many Tory seats in the Thames Estuary.” He had wanted to keep open the capability to manufacture fast jets here. Yet the eventual decision to buy the US Joint Strike Fighter to replace the Harrier ended that ability anyway. Sir John’s final verdict on the Eurofighter procurement was that it was “one of the worst decisions I made at the MoD.”

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<sup>16</sup> Oxford Economics, *The Economic case for Investing in the UK Defence Industry*, 2009. Note that this report was commissioned by the Defence Industry Council.

<sup>17</sup> BBC Radio 4 documentary, Eurofighter, 5 January 2004.

### ***The false arguments: exports, research and jobs***

Britain is Europe's largest defence exporter, but given how little other EU countries commit to defence equipment, this is hardly surprising. And growth prospects for defence exports are uncertain and can bring political and diplomatic complications.

Such sales can even create strain within alliances. Because of US concerns about French defence exports to China, for example, the Pentagon is reluctant to share technology with Britain if there is a chance it will find its way into Anglo-French collaborative projects. There is also the problem that some of what is manufactured for UK forces is so sophisticated that the only nations likely to want and afford it are those which can build it themselves. Sir Nigel Essenhigh, chairman of Northrop Grumman UK, observed recently that the Type 45 destroyer, currently Europe's biggest warship project, and the Astute submarine were world-beaters – but not exportable.<sup>18</sup> The Gray report also noted that the perverse incentives for service chiefs to bid for ever more sophisticated solutions means that the kit commissioned is often too advanced to be exported. Also, it observed that the MoD lacked the skills to work out whether export sales were in fact a way to lower unit costs.

The industry's contribution to defence sector research and development is also limited. According to the Defence Technology Strategy, the self-financed contribution from the aerospace sector to defence R&D was only 2.2% of its £12 billion turnover, compared to a 6% of turnover contribution on the civil side of aerospace. The Oxford Economics study put the industry's R&D spending in 2007 at 4% of turnover, down from 8% in previous years.

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<sup>18</sup> Speech to Jane's UK Defence Conference, 7 September 2009.

The MoD estimates that in 2006-7 there were 80,000 direct full-time jobs as a result of its own equipment expenditure, down from 85,000 in 2002-3. In a country with employment of 29 million, this is less than 0.3% of total UK employment.<sup>19</sup> As for those employed by the defence export business, the number is also low. At 55,000, it has halved since 1997-8. Of those jobs, only 25,000 are directly, as opposed to indirectly, connected to exports.

### ***Lobbying power***

Despite its small overall size and limited export potential, however, the industry is a key employer in areas like the Clyde, Barrow-in-Furness, Preston, Manchester, Portsmouth and Plymouth. As the Oxford Economics study noted, the industry is strong in Scotland, South Wales and parts of Lancashire, and particularly in areas where traditional industries have declined and alternative employment is limited.

Because of these local concentrations, the lobbying power can be significant. The Defence Industries Council is planning to conduct a public awareness campaign over the next two years which will emphasise the industry's contribution to national security. Similarly, members of the House of Commons Defence Select Committee often represent constituencies where the defence industry is an important employer.<sup>20</sup> However, if the taxpayer is to get value for money, local pressures must be resisted.

For example, Britain makes fewer than 1% of the world's ships. The National Audit Office has been highly critical of the insistence that naval ships need to be built, as opposed to maintained and operated,

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<sup>19</sup> DASA, *UK Defence Statistics*, 2008

<sup>20</sup> Of the current members of the Defence Select Committee, David Borrow is MP for South Ribble (where BAE is a major employer); Linda Gilroy and Mike Hancock are both MPs for Portsmouth seats (Portsmouth is the largest naval base in Western Europe); Kevin Jones is MP for North Durham where Royal Ordnance is a major employer; and Robert Key is MP for Salisbury (where the MoD is the largest single employer). John Smith is MP for the Vale of Glamorgan where a project to build a £12 billion defence technical centre has recently been given the go-ahead.

here. The current £4 billion Future Carrier project involves a total of eight sites building the two biggest ships the Navy has ever had. Ian Brennan, procurement director for the Aircraft Carrier Alliance, has joked at a recent conference: “If we had our way we would build blocks (of the two ships) in every single MP’s constituency”.<sup>21</sup> And John Weston, former chief executive of BAE Systems, wrote frankly in 2008:<sup>22</sup>

“It is a fact of life in the defence market that, when spending very large sums of the taxpayers’ money, politicians like to see some benefit of this expenditure accruing to those that vote for them. There is, in my view, a clear link between the government’s willingness to spend, and the local employment considerations. The carriers are a recent unfortunate example.”

The argument for directing defence spending to domestic suppliers in order to improve its legitimacy is out of date. Few people know or care that much capital equipment in the NHS is manufactured in Germany or China. Similarly, the procurement decisions may be controversial in the immediate locality but value for money in terms of military effectiveness must come first. As Walsall South MP and former Defence Select Committee chairman Bruce George once put it, the soldier wounded on the battlefield does not think “Good, this field ambulance was made in Cambridge or Solihull” but “Is this ambulance going to save my life?”

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<sup>21</sup> Speech to Northern Defence Industries Conference – Defence Procurement for the next five years – involving SMEs, 26-7 March 2009.

<sup>22</sup> Quoted in B Kincaid, *op. cit.*

The prime considerations from a defence perspective must be military effectiveness, operational sovereignty and value for money. As former Permanent Under Secretary Sir Kevin Tebbit once put it:

“My first duty is to ensure the armed forces are equipped with the equipment they need, when they need it and at a price we can afford. That is my first responsibility as permanent secretary”.

Government must also be wary of arguments about the need, for reasons of national security, to “preserve our defence industrial base”. It has long been true that we cannot build everything we need here. Rather, the task is to work out what industrial capabilities and skills are needed to ensure operational independence, and where the requirement, or indeed the necessity, is simply to be an intelligent customer sourcing globally.

Much of the work of defining what technological capabilities must be maintained in the UK, across fields as varied as CBRN,<sup>23</sup> radar, body armour, helicopters and drones, has already been carried out in the Defence Technology Strategy (DTS) of 2006. The Strategy drew fine distinctions between the technologies where production capacity, or the role of design authority, is needed onshore, and those where the MoD needs only the ability to be an intelligent customer, able to choose, integrate and operate equipment developed and produced elsewhere. There is considerable detail both on overarching technologies and in specific areas from close combat to counter terrorism to aircraft and ships.

In some areas, such as the manufacture of silicon chips necessary for the current expansion in electronic warfare, the DTS notes that the control of supply Britain would ideally exert has long since disappeared.

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<sup>23</sup> Chemical, biological, radiological, and nuclear weapons.

Similarly, in an ideal world, Britain would not be reliant on limited global supplies of all the exotic materials necessary to make body armour, for example. And according to the DTS, pressures on the world microchip manufacturing capacity may limit the speed and extent of developments in sophisticated imaging and communications system. There are some vulnerabilities, it seems, which cannot be helped.

But in some areas, such as sensors and radar, Britain is a world leader both in design and production. And in others, Britain can and should retain the ability to keep up with and even influence development, as well as being able to operate, maintain and upgrade equipment sourced globally on a commercial or military off the shelf basis. Deciding what level of design or production capability is needed here is an important task which, the DTS shows, can be carried out, even if the work now needs updating alongside a new SDR.

However, the Defence Technology Plan which was supposed to show where MoD would finance research and or development, and where industry must do so itself, has not yet been completed adequately. “There is nothing here which would inspire a start-up, or cause a venture capitalist to reach for his cheque book”, according to one expert. This work must be finished.

### **The third guiding principle: implement the Gray recommendations**

The Gray report diagnosed many of the problems with defence procurement. It blamed the vested interests of many participants in “optimistically mis-estimating” costs and deliverability, in the knowledge that once a project is in the Equipment Plan, cancellation almost never happens: “the process of over-ordering and under-costing is not constrained by fear on the part of those ordering equipment that the programme will be lost”.

Once the go-ahead is given, “constituency interests, BERR (now the Department for Business, Innovation and Skills) and industry will have

been mobilised in support". So projects are seldom cancelled. And the projects will originally have entered the Equipment Plan on the basis of wish-lists which ignore the possibility of 80%, good-enough solutions in favour of a "Bid High Spec, Bid Full Spec" approach. Those involved know there is little chance of raising the specification further down the line, so there is every incentive to bid for the most sophisticated solution – in one case discovered by the Gray team, "just within the laws of physics". This behaviour among MoD civil servants, the military and industry must be changed if the balance of investment across the whole range of requirements is to be the right one.

The acquisition process is also a recipe for technical problems, especially because not enough is spent to reduce the risk of projects at an early stage, and also for overspending. The rising costs are often dealt with, for the purposes of annual budgets, by delaying (as for example with the decision in late 2008 to delay construction of the two supercarriers). Because many of the threats against which the equipment is meant to protect the UK do not materialise in a given year, that behaviour goes unpunished. However, money is spent on industrial overheads and working capital, not capability as such, and therefore the cumulative total spend gets bigger and more unaffordable. And the door is left open for changes to specification to reflect technological advances, which then create further rounds of contractual uncertainty and delay.

In addition, the process involves an undisciplined adding together of competing wish-lists. Army, Navy and Royal Air Force personnel, both as front line customers and within the MoD, are under pressure from their own services to maximise what they can get. No-one sets out to get underperforming, late equipment, but that is the unintended consequence of the perverse incentives involved.

The Gray report also makes recommendations on the customer/supplier relationship between the MoD Centre and Defence Equipment

& Support (DE&S), where around 23,000 staff are employed. In particular, it recommends that:

- Responsibilities should be clarified and skills improved, for example by removing the three single service Chiefs of Materiel within DE&S. The Chief of Defence Materiel should be a very senior professional programme manager, recruited externally.
- Military personnel without programme management expertise should be advisers but not line managers. Those in senior management positions would have to undertake to remain for a double tour of at least four years, rather than two as at present.
- External legal advice on contracts should become the norm.
- The independent costs estimation function within DE&S should be boosted. The Through Life Capability Management approach, which is aimed at looking at the costs of supporting and operating equipment over its life, as well as its capital costs, should be revisited to make “spend to save” decisions easier.
- “Contracting for availability” approaches which are common in the private sector should be used when buying equipment which will need extensive maintenance.
- Companies such as British Airways have developed effective financial models for working out acquisition versus support costs. Similar models should be developed by the MoD.

In addition, there are a range of options for bringing in more private sector expertise, ranging from the Government Owned Contractor Operated model recommended by Gray for DE&S, to the use of private sector strategic partners or the spinning out of individual projects.

These recommendations should all be implemented.

### **3. ESTABLISH WHAT WE ARE GOOD AT**

There has been no Strategic Defence Review (SDR) since 1998, though in the wake of 9/11, a so-called New Chapter was published in 2002. Lessons to be learned from the wars in Iraq and Afghanistan, along with the evolving threats from Iran and potentially Russia and China, have prompted both Labour and the Conservatives to promise a new SDR after the election. Work has already begun on a Defence Green Paper to be published in early 2010. The absence of a strategic plan for so long was condemned in the Gray report as unthinkable in the private sector.

Whatever the outcome of the SDR, the capabilities that remain will need to be operated alongside those of our allies. This means, in practice, that our equipment must be aligned, if not matched to, the technical standards set primarily by the US. A Strategic Defence Review will also influence which type of equipment we can buy from abroad; and which type of equipment we must manufacture here for strategic reasons. To the credit of the present government, it did produce a Defence Industrial Strategy (DIS).

The DIS, rightly, aimed to distinguish between those industrial activities which should continue to exist in the UK; and those for which foreign suppliers could be substituted if they offered better value. It aimed to set out which industrial capabilities needed to be retained in the UK in order to ensure that we were able to operate equipment as we choose and

thereby maintain appropriate sovereignty. Other capabilities, the DIS stated, could be satisfied by open international competition.

This was an important step forward. It was greeted with enthusiasm by defence companies as it seemed to offer the clarity necessary for them to take long-term decisions. The DIS did not, however, resolve the questions of design authority and transfer of intellectual property that arise out of the need to maintain, operate and upgrade complex equipment sourced from overseas. One example of this relates to the stealth covering for the Joint Strike Fighter which the UK, along with a number of other nations, is buying from the US. The know-how to repair damage is particularly complex and appears not to have been transferred by the US. As the former head of Defence Export Services, Professor Tony Edwards, told a recent conference:<sup>24</sup>

“The Department of Defense pretended to give it to Lord Drayson and we pretended to get it.”

This is a diplomatic challenge. If we are to be the principal military ally of the US, the the UK needs access to this sort of technology.

The DIS was also criticised for failing to state how its aspirations would be put into practice. Its architect, Lord Drayson, left his post as Defence Procurement minister in 2007. The second stage of the DIS, known as DIS2, was promised in 2007 or 2008 but never emerged, although there have been sector strategies in areas such as helicopters and land equipment. Defence Procurement Minister Quentin Davies MP has promised separate “sector statements where we can see a clear way forward” but no timetable.<sup>25</sup>

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<sup>24</sup> Speech to “Punching above the Budget”, Prospect conference, 1 April 2009.

<sup>25</sup> Ibid.

The Gray report did note that “to a certain degree, DIS militates against the effective operation of competition in key areas of equipment acquisition with the consequence of increasing costs by deliberately moving to ensure sustained, efficient, onshore industrial capability.” This highlights how important it is for government to be clear about the sovereign capabilities that are required. Some of this has already been done in the Defence Technology Strategy. This states:

“We have identified specific technology areas where we conclude we need to retain or develop capabilities in the UK supplier base. These are necessary to maintain the appropriate degree of sovereignty over industrial skills, capacities, capabilities and technology to ensure operational independence. This is not the same thing as “procurement independence” or a total reliance on national supply of all elements. In many, even high priority areas, we can and do rely on overseas sources, but there are critical aspects of each areas where to do so would compromise this operational independence, and hence our national security. These considerations also apply where specific UK capabilities give us an important strategic influence, in military, diplomatic or industrial terms; and in some cases, where retention is necessary to maintain realistic global competition – in other words, where we are not prepared to risk dependency on an overseas monopoly.”

Other governments carrying out major changes to their strategic assumptions, such as Australia, see the need for such a process. Undoubtedly, both UK and overseas-based contractors must be given a clear indication of what will be sourced only domestically, and what will be bought in the global market.

## 4. THE CONSPIRACY OF OPTIMISM

There have been repeated attempts to reform defence acquisition. But they have not worked. After more than a decade of recording failures under successive Defence Secretaries, the National Audit Office (NAO) revealed in 2008 that the 20 largest defence projects of 2007-8 showed the aggregate cost had risen by £205 million since the previous year – excluding an undisclosed figure for Eurofighter Typhoon – and aggregate in-service dates had increased by eight years. The Gray report found further extensive further evidence of underperformance using internal MoD data.

Deep-rooted problems of estimating and defining requirements characterise this area of spending. As far back as 1961, the Gibb-Zuckerman report on MoD research and development was detecting problems that are still familiar today. They included:

- poor initial estimates of time and cost;
- failure to define the capability required and to define performance parameters;
- failure to identify technical risks.

It is easy to assume that these problems are due to the inherent complexity of buying equipment that takes a long time to develop, when strategic needs and technology are always changing. But these problems cannot be dismissed as inevitable. There are features which make defence economics unusual, as is the fact that domestic or foreign states are the only buyers (at least in principle).

But complexity and long lead times are not unique to defence. The NAO has looked at complex projects in the oil and gas industry, such as the construction of North Sea oil rigs, and found project management there is often better.<sup>26</sup> It is true that inherently hard to forecast geo-political changes such as the end of the Cold War and rise of al-Qaeda make life difficult for the defence industry. But in the energy industry, an unpredictable oil price and political pressures also have an impact. That does not, however, make effective project management there impossible.

A common criticism of MoD procurement is that there is a “conspiracy of optimism” in which MoD and industrial companies are co-conspirators. Gray spoke of vested interests optimistically mis-estimating in the knowledge that cancellation is rare. Both MoD and industry have a propensity to strike bargains which are unrealistic. MoD reflects ambitious foreign policy and Service aspirations.

There is also the problem of “entryism” where manufacturers adopt a “must win, bid low” attitude to major contracts. The assumption is that for political reasons, contracts are rarely cancelled once awarded. As has been observed:<sup>27</sup>

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<sup>26</sup> See for example, NAO, *Driving successful delivery of major defence projects: drawing on wider practice in tracking progress on major projects*, 2004.

<sup>27</sup> B Kincaid, op. cit.

“Ministers are not keen on cancelling things on which significant sums of public money have already been spent, even when much greater sums of public money may be needed to put it right.”

As a result there have been few cancellations of major projects over the last decade in UK – whereas in the US 76 programmes were terminated for the US Army alone over one five year period.

Elsewhere in industry, suppliers winning a contract at too low a price are punished by having to withdraw, or else making a loss. In defence, however, suppliers seldom face the risk of cancellation. In that knowledge, they can often use contract mechanisms to claw back their profit after bidding low. So the incentive to put in an over-optimistic bid is strong.

The Gray report also blamed the blurred distinction between customer and supplier within MoD. DE&S, supposedly the supplier, simply accommodates unrealistic expectations and specification changes by MoD Capability Sponsor. There are only a few examples of DE&S turning down requests for contract alterations.

### **The problem of market concentration**

As for manufacturers, consolidation and market concentration following the end of the Cold War has left a contractor like BAE Systems able to assume it will always be in with a chance for major contracts. So it can expect to go on being a major MoD supplier even after the debacles of the Eurofighter, the Astute submarine and the NIMROD and Brimstone programmes. So trying to force the risks of non-performance onto the supplier by means of fixed price contracts is not the answer. Fixed price contracts simply do not work when there is only a handful of suppliers and hence no naturally competitive market. And the suppliers know that however badly they perform, the MoD seems to be stuck with them.

The response of MoD has been to emphasise “partnering”. That means working closely with a supplier who is given incentives to save costs. MoD Permanent Under Secretary Sir Bill Jeffrey recently described the process to the Public Accounts Committee. After serious difficulties arising from a poor relationship with BAE were identified, what he called a new “commercial construct” was agreed in 2007:<sup>28</sup>

“(Recognising)that we are effectively dealing with a single UK shipbuilding provider, (we) work very closely with them, have complete transparency of costs and estimates and accounting on either side”.

However, Sir Bill stated that in this case there was a benchmark against which to measure the contractor’s costs in the form of comparisons with projects elsewhere in the world. But such benchmarks are not always available and it is not always possible to be sure that the company’s books have genuinely been opened.

This problem of the “must win” approach is at the heart of defence procurement. As Andrew Sleight, Chief Technology Officer of the privatised defence contractor Qinetiq put it: “The problem is not that the customer is not intelligent but that there is a lack of openness about risks”.<sup>29</sup>

The lack of transparency, both in the MoD and in industry, has the effect of allowing mistakes to go unpunished. That must change. In the US, when a programme breaches its cost ceilings, the Department of Defense has to testify before Congress that there are no alternatives to continuation. A similar procedure here would encourage less unrealistic forecasts.

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<sup>28</sup> PAC, *Ministry of Defence: Type 45 Destroyer*, June 2009.

<sup>29</sup> Prospect conference, 1 April 2009.

## **Contracting from SMEs**

The problem of market concentration in defence procurement is reflected in the limited role played by small and medium sized companies (SMEs). However, there is evidence to suggest that SMEs are more likely to innovate than are big firms, and are more likely to respond positively to the customer's demands. Indeed, Andrew Tyler, Chief Operating Officer of DE&S, recognised this when speaking to a recent conference of SMEs organised by Northern Defence Industries. He pointed out that:

“So many of the bright ideas come up from the SME community”.

Because of consolidation in the industry and the MoD's reliance on a small number of prime contractors, the supply chain has often become “frozen”. The prime contractors rely on their established supply chain and have little incentive to bring in new suppliers – even when the end result is poor performance.

For example, in the early days of Operation Telic in Iraq, 25 Army Land Rovers a week had to be taken out of service because of dust damage to their engines whereas the US HUMVEES did not have this problem. It was not a new difficulty. During a previous exercise, it had been found that Challenger tanks were often lasting only four hours in service because of dust, whereas US Abrams tanks could function for 1,000 hours thanks to the filters fitted on their engines.

According to the UK sales manager of Donaldson Filter Components,<sup>30</sup> the SUV IPT within MoD approached his firm, part of a large US company which supplies 85% of the filters on US army vehicles as well as commercial manufacturers such as Caterpillar. The problem was

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<sup>30</sup> In interview with the author.

duly solved. However, it then took three years to break into the supply chains of other IPTs facing similar engine problems. Assuming there is no valid reason for these delays, such apparent reluctance to expose existing suppliers to competition and such a slow response to solving a real and expensive problem, is highly unsatisfactory.

The problem could be addressed by judging primary contractors according to their readiness to open up their own supply chains to more competition. Their ability to get multiple bidders offering the best price and the most innovative solutions might become a Key Performance Indicator when their suitability as participants in partnering arrangements is judged. Recognising criticism the industry has launched an initiative called 21<sup>st</sup> Century Supply Chains. But there is a danger that this will only be window dressing. Explicit monitoring of how a partner manages its supply chain should become the norm.

## **5. A MORE INTELLIGENT CUSTOMER?**

In 1985, Peter Levene, now Lord Levene of Portsoken, was charged by Margaret Thatcher with the task of shaking up and making more commercial the relationship between the defence industry and MoD. The then British Aerospace and Rolls-Royce had both been privatised and were, it was felt, enjoyed excessively cosy relationships with the MoD, with too many cost-plus contracts creating generous profit margins for the firms concerned.

Lord Levene therefore introduced more competition, passed more responsibility for research and development to industry while continuing to meet the costs, and encouraged more contracts to be agreed on a fixed price basis, or with incentive pricing, rather than using a cost-plus basis. And there were cancellations. The Thatcher Government cancelled an earlier version of the Nimrod reconnaissance aircraft in favour of an alternative from Boeing.

In 1993, the National Audit Office started a programme of detailed annual reports on the time cost and performance of the 20 most expensive defence programmes. This sophisticated analysis, subsequently used by the Defence and Public Accounts select committees, helped make poor management in the MoD a target for the incoming Labour Government.

At the same time, the end of the Cold War created expectations of a peace dividend, which in turn led to a slimming down of the industry and fewer suppliers. That made getting value for money harder. Consolidation meant many suppliers exited defence entirely or were taken over by BAE Systems. So just as Lord Levene was emphasising more competition, the world in which MoD could expect to see multiple UK suppliers competing for contracts, was disappearing.

The new Labour government called for “Smart Procurement” and brought in the management consultants McKinsey. Change followed. The Procurement Executive, a sub-division of MoD formed in the 1960s became the Defence Procurement Agency. The three still separate Army, Navy and RAF logistics organisations were converted into a single Defence Logistics Organisation. In 2007, the Defence Procurement Agency and the Defence Logistics Organisation, which together employed 25,000, more than one for every four soldiers, were put together to form Defence Equipment and Support (DE&S). However, the Commons Defence Committee observed in 2009 that in its first year of operation DE&S had failed to meet its Public Service Agreement objectives of delivering the equipment programme to cost and time. The Gray report was doubtful that Smart Acquisition, as the programme was later called, had achieved as much as it should have done.

Some changes in approach since 1997 were the right ones. A more incremental approach to specifying equipment was encouraged, so that if military needs changed, that could be reflected at a later stage. That made more sense than trying to create an all-singing, all-dancing solution at the outset. This approach was known as “technology insertion”. But, as Gray noted, the “Bid High Spec, Bid Full Spec” incentives in the system encouraged the opposite: “big leap” development involving the maximum technology stretch to try to ensure the programme would not be obsolete by the time it arrived.

In order to create a clear-cut distinction between customer and supplier, a new three star Deputy Chief of the Defence Staff for Equipment Capability was to be accountable as the ultimate customer. His “Equipment Capability Customer” (later called Capability Sponsor) was organised according to capabilities sought rather than particular “platforms” – for example, tanks or aircraft. Instead of the project managers at the old Procurement Executive, Integrated Project Teams (IPTs) involving service and scientific staff as well as procurement executives were created. However, they were organised into projects according to the stage of development the equipment had reached. So the leaders of the IPTs had to speak to a number of different people in the Equipment Capability Customer. The Gray report was later to criticise these multiple interfaces. And the IPTs were also created on a single service rather than a Joint basis. They also had to communicate with separate staff responsible for maintenance and support, who sat within the Defence Logistics Organisation. There was therefore a proliferation of communication lines and uncertainty over decision making.

There was to be a “through life” approach in order to ensure that the often very significant maintenance and upgrade costs over the life of the equipment were factored into the initial decision. That was a departure from focusing only on initial capital costs – dubbed the “throw it over the wall” approach – and reflected the fact that support costs could add up to more than initial ones over a system’s life. The Gray report, however, recommended more use of “contracting for availability” deals with manufacturers and of financial models for calculating acquisition versus support costs enabling “spend to save” decisions.

By 2009, some headway had been made in addressing problems with the training, incentives and quality of staff involved in defence acquisition. According to the Defence Select Committee’s most recent report, good progress has been made in bringing in more staff with a

commercial background. And there has also been some progress in reducing headcount from the 27,000 when DE&S was created in April 2007. By September 2008 a 15% reduction had been achieved, to around 23,000. By 2012, DE&S plans to have reduced its staff by a total of 25%, to around 20,000.

However, public service targets have not been met. Industry sources, albeit ones with a vested interest in encouraging more outsourcing, believe more cuts could be made. One academic has recently pointed out that informal networks to provide customer feedback from the troops using the equipment are still poor.<sup>31</sup>

Other countries, perhaps because they do not have a defence industry with significant lobbying power, appear to have learned the lesson that an off-the-shelf solution fast is better than a bespoke one too late. Representatives of IBM commented to Australia's 2008 Mortimer review of defence procurement and sustainment:

“The increased utilisation of off the shelf equipment is an imperative... Most militaries have drawn similar conclusions that they can't afford the cost time and risk in managing custom development of bespoke solutions...”

It may be IBM's experience that most militaries have reached this conclusion. But there is little evidence that this lesson has been learned in the UK. As the Chief of the General Staff, Sir David Richards, commented recently, too often the UK strives for hugely expensive 100 % solutions.<sup>32</sup>

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<sup>31</sup> Professor Karen Carr, Cranfield University, in RUSI, *Defence Systems*, June 2009.

<sup>32</sup> Speech delivered by Chief of the General Staff General David Richards to Chatham House, 17 September 2009.

## 6. TWO SUCCESS STORIES

### **Urgent Operational Requirements**

The Urgent Operational Requirement procedures (UORs) involve the MoD and industrial teams working together fast to provide theatre-specific capability urgently required at the front line. UORs are funded by HM Treasury out of the contingency reserve, but only for a limited period. Then they must be scrapped or transferred into the defence budget.

This approach works well. The Commons Defence Select Committee praised it in 2007 and in 2009 concluded that it had “continued to prove highly effective in enabling vital equipment to be provided in quick time to our Armed Forces in Afghanistan and Iraq.” Chairman James Arbuthnot MP went so far as to describe the UOR, by analogy with fashion, as “the new black”.

Similarly, the NAO delivered a favourable verdict on UORs in its analysis of the quality of support to operations in Iraq and Afghanistan. There were some distinct problems which meant existing equipment was inadequate. The problems were: the evolving ability of the enemy to use roadside bombs, the difficult climate and terrain, and the fact that tanks could not be used where they would unduly intimidate civilians. So, modifications were needed for helicopters and fixed wing aircraft, for better protection for vehicles, for early warning attack

systems for bases and for electronic counter measures. Between July 2007 and March 2009, the NAO found 57% of all demands made in Afghanistan and 71% made in Iraq met their supply chain targets.<sup>33</sup> Similarly, the Gray report found from internal MoD information that over 75 % of UORs achieved their target in service date. It observed that front line commanders believed the process to be working, and concluded albeit from limited analysis that better trade-offs between performance time and cost were made in the UOR process than in the standard Equipment Procurement Plan system.

This, by the standards of the MoD, is a great success. A total of £3.7 billion in equipment has been acquired through UOR since 2002/03. Only 700 to 750 of DE&S's 23,000 staff are involved.

The UOR processes could not be used to develop and support something as complex and long-enduring as an aircraft carrier. Nevertheless, lessons should be learned for the mainstream acquisition process, in particular:

- its wartime mentality. Procurement is based on a must-do approach. Perfection is not expected. The process does not permit the cycle of overoptimistic specification, bidding low and desperate renegotiation.
- its emphasis on speed.<sup>34</sup> In contrast, the peacetime mentality that had become normal in MoD is that “things can take as long as is comfortable”.

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<sup>33</sup> NAO, *Support to High Intensity Operations*, May 2009.

<sup>34</sup> An example of the speed of UOR procurement can be found in the conversion of the Stryker armoured vehicle, which took only four years from idea to production model to successful deployment in Iraq.

- its limited ambition. There is no time for "scope creep" – changes of specification that trigger new rounds of costings and possibly rejection, causing delays.

The UOR approach is being used for pieces of equipment which would previously have been programme projects in their own right. But they are reaching the theatre far more quickly. A further 700 new vehicles are to be procured using this method. That will be a key test of whether this is an approach which should be more widely used.

### **The Australian approach**

There is evidence that procurement can, given political will, improve.

Following its change of government in 2007, Australia conducted a major review of its strategic priorities through to 2030. The review called for new ships and planes to respond to possible tensions in the Pacific. It also instructed the businessman David Mortimer to look at improving defence procurement, following a review in 2003 that had investigated delays and cost overruns of a kind familiar in Britain.<sup>35</sup>

The Australian Government recognised that the globalisation of defence production, and the relatively small volumes required, would make "Australia-unique" defence programmes rare. However, the government said explicitly that it was minded to retain certain strategic industry capabilities in Australia. The "health of the industry sector", including workforce size and skills, were admitted as a factor that could prompt government intervention. The Defence White Paper also called on the government to identify Priority Industry Capabilities which it is prepared to intervene to support.

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<sup>35</sup> *Going to the next Level*, the report of the Defence Procurement and Sustainment Review, September 2008.

The study made a number of recommendations which are relevant to the UK's needs. Naturally, good project management skills in the "customer" body and "through life" thinking were called for. Those recommendations should go without saying. But there were other recommendations which should prompt fresh thinking here.

For example, it recommended that the capability customer should conduct annual reviews detailing current and future capability gaps. In other words, the possibility of gaps between what the Government wants the armed forces to do and what they can do should be looked at far more often. In UK terms, this would mean giving service chiefs the formal ability to point out gaps between the Defence Planning Assumptions arising from a new Strategic Defence Review, and what they have the equipment to do. There have been many high-profile resignations after the event, by officers such as Brigadier Ed Butler and Major Sebastian Morley, citing equipment shortcomings. This whistleblowing may be courageous. But by the time it happens it is too late.

What is needed is a system which would allow, or indeed oblige, the chiefs of staff to predict such problems before they arise. And they need to be able to do so on a schedule that cannot be changed to avoid awkward truths before an election. Chiefs of staff need to be able to state what they are going to need – particularly given the long lead times involved – without having to wait for a new Defence Review at a politically convenient time. This call for regular SDRs, along with procedures for the Permanent Under Secretary to account annually to Parliament on affordability and other changes to keep the Equipment Programme on track, was a major recommendation of the Gray report.

Secondly, the Mortimer report included a series of recommendations aimed at tackling the "conspiracy of optimism" which was also pervasive in Australia. It recommended that a major capital project should not be approved unless there has been a disciplined look at the risks. This would avoid the problem of a ship or missile based on

unrealistic aspirations squeezing into MoD plans, and then becoming a project with a life of its own and little chance of cancellation.

Once given the go ahead, a draft material agreement would set out clearly the responsibilities and expectations both of customer and supplier. Crucially, changes in scope or specification would require the customer to look at the costs as well as the benefits of adding extra features. This is vital. It is all too easy for UK service chiefs or those further down to add “nice to haves” to the “must have” requirements. There clearly needs to be a disciplined process for looking at the costs, financial and in terms of potential risk and delay, of adding these features.<sup>36</sup> The Gray report also notes that specifications should be clearly costed so that it can be judged at a senior level whether they are worthwhile relative to the benefits.

Thirdly, the Australian report recommended that procurement officials should have significant private sector and commercial experience and be able to change pay and terms for the workforce far more easily. It is true that in the UK the present chief operating officer of DE&S was previously managing director of the UK’s largest independent naval design and engineering consultancy. But more such appointments would help here.

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<sup>36</sup> It is perhaps because the UOR process does not allow for much “scope creep” of this kind that it is so successful.

## 8. RECOMMENDATIONS

The UK has to reconcile its obligation to defend its national interests with huge demands on the existing defence budget. At the same time, fast-changing technology and the standards set by the vast US defence budget add further pressure.

The record of cost overruns and delays in buying military equipment could help swing public opinion towards cutting defence spending overall. It is therefore essential that the Government makes the political case for keeping defence as a priority by showing that it will spend more wisely because it has learned the key lessons of the past. It must therefore:

- show it has abandoned the fantasy that European collaboration on major projects is a likely route to saving money. It is not.
- define which parts of defence manufacturing must be maintained in this country, for security of supply and continuing support reasons; and which involve requirements that can be put out to competition among suppliers around the globe.
- complete the second stage of the Defence Industrial Policy and revisit the Defence Technology Strategy of 2006 to create a funded Defence Technology Plan.

- review capability gaps regularly on a set schedule, entitling the Chiefs of Staff to demonstrate what is needed rather than merely responding to how much or how little they think is available in a Comprehensive Spending Review.
- make the Permanent Under Secretary accountable to Parliament for affordability.
- apply the lessons of speed and simplicity from the Urgent Operational Requirement process.
- encourage innovation by small and medium sized firms. This should involve opening up the supply chain used by major contractors by making promotion of competition a performance requirement in contracts.
- end the conspiracy of optimism. The MoD as equipment customer must perform cost as well as benefit analysis of changing specifications, with cancellation a genuine option.
- expect more co-operation from the US over relevant technology transfer.
- make the DE&S more commercial in its staffing and practices.
- make off the shelf technology, not “exquisite solutions”, the default option in acquisition.

By implementing these changes, the government can make the political case for prioritising, or at the very least protecting, defence spending. It can show not only that the UK should shoulder its share of responsibilities for its own security, but also, through intelligent reform, that it can afford to do so.

Deep reform to UK defence procurement is essential. As Lord Guthrie notes in the Foreword to this report:

“The shameful waste and delay which characterise the sorry history of equipment procurement should never have been tolerated. In the past, such indulgence was wrong. Now it is both wrong and unaffordable.”

The Ministry of Defence must deliver better value for money. To do this, three guiding principles must govern decision making: the limits of EU collaboration must be recognised; equipment should be bought on the grounds of military effectiveness and value for money – not the impact on “jobs”; and the “conspiracy of optimism” between the MoD and the defence industry must end. Without such reform, public support for maintaining defence spending will surely wane.

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