

## ***SUBMISSION TO THE FIRST PRINCIPLES REVIEW OF DEFENCE***

**QinetiQ** is one of Australia's largest independent providers of specialist technical advisory services to Defence. We are a trusted partner to Governments, Defence and Industry worldwide and our advice is independent of product, platform or capability.

### ***Our Story***

**QinetiQ** was created in 2001 by the privatisation of the UK Defence Evaluation and Research Agency (DERA). Some sensitive aspects of DERA's business was retained in public ownership in what became the Defence Science and Technology Laboratories (DSTL). The privatisation process saw the wholesale transfer of the Civil Service workforce, along with their terms and conditions of service across to QinetiQ. While our headcount has reduced from around 11,000 at privatisation to 5,000 today, we continue to deliver the same level of output, largely through improved efficiency. We play a central role in research and development, providing advice the UK Ministry of Defence (MoD) on the development and procurement of capability. We also enable the test and evaluation of systems throughout their lifecycle. There has been some re-balancing between QinetiQ and DSTL in the last few years, with expansion and contraction in both areas.

### ***Our Views***

**QinetiQ** has recently contributed to inquiries undertaken by Parliament's Joint Standing Committee on Foreign Affairs, Defence and Trade into the Defence Annual Report 2012-13 and defence exports. This submission draws on and develops the themes raised in those papers with emphasis on:

- The role of Specialist Service Providers in support of Defence.
- Reform of the Capability Lifecycle.
- The commercialisation of the Defence Science and Technology Organisation (DSTO).

### ***The Role of Specialist Service Providers in Support of Defence***

Defence industry policy tends to focus on the role of local manufacturing, particularly in relation to the delivery of large capital projects; often overlooking the role played by service providers. Service provision is normally thought to be synonymous with support services such as catering and facilities management. At QinetiQ, we specialise in "high end" engineering and technical consultancy services, providing expert advice and independent assurance to Defence at all stages of the capability lifecycle: from requirement definition through to acquisition, acceptance, in-service life and disposal. Expert advice to Government is at least as important in mid-life upgrade programmes as it is in initial acquisition, particularly to help assure the cost capability benefits of upgrade versus replacement. Companies like ours will increasingly become the repository of niche specialist and technical skills as public service numbers decline.

**QinetiQ** recognises that certain functions and services need to be retained in public ownership, either because of their sensitivity, or because they are not commercially viable. However, there are many areas where Defence could secure guaranteed access to facilities, advice or services, without needing to own, operate or deliver them. This can be provided by partnering agreements based on Key Performance Indicators that lock in value for money across the contract lifetime. Areas where we can see such an approach delivering value for Defence include, but are not exclusive to:

### ***Land-Based Test Facilities***

The Woomera Test Range is critical to the safe and effective delivery of Australian military capability. The Hawke Review recommended a co-existence scheme to balance Defence's materiel testing and evaluation needs with non-Defence access by traditional land owners and the resources sector. We know that there are very real concerns about the practical implications of the co-existence model.

**QinetiQ** has been working with Defence Materiel Organisation (DMO) and the Royal Australian Air Force to provide priority upgrades to the Woomera Range Control and Safety System (RCSS).

RCSS instrumentation and sensors are vital to give effect to the co-existence model, and provide the systems necessary to share Woomera with non-Defence users. QinetiQ manages or supports a number of similar ranges around the world, all of which are dual or multi-use. We facilitate a joint usage framework, including sharing airspace with civil aviation authorities. Our operations take place in congested environments, safely and efficiently and in one case<sup>1</sup> hosted more than 1.5 million tourist visitors to the range area in a single year. Opening Woomera up to non-Defence users is achievable, will create new jobs and reinvigorate the economy of the surrounding region. Additionally, there would be an opportunity to market spare capacity in this unique facility to other users including industry, with the potential for the Commonwealth to benefit through gain-share

### ***Maritime Signature Management***

Maritime signature management is an area where an Enterprise approach can bring operational benefit while at the same time reducing the administrative overhead for Defence. An essential part of Test and Evaluation enabling acceptance into service and operational force generation; signature management for the Royal Australian Navy (RAN) is delivered across seven fixed (and two mobile) ranging facilities. These are run by a mixture of four Defence agencies with multiple industry partners and are heavily dependent on a shrinking pool of specialist public service staff in the Australian Maritime Warfare Centre (AMWC). Increased pressure on ships' programmes causes frequent changes and it is possible for platforms to deploy operationally without conducting ranging. As a result they may not have a clear understanding of their signature and risk profiles.

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<sup>1</sup> Aberporth Range in Wales in 2013.

Furthermore, the introduction of two new classes of large warship; the Landing Helicopter Dock (LHD) and the Air Warfare Destroyer (AWD), will increase demand for ranging activity with no funded increase to range capacity or capability.

**QinetiQ** has extensive Maritime Range and Signature Management expertise. Working in partnership with other capability stakeholders in an Enterprise arrangement, we believe that we can provide a managed service that can enhance range capability and availability, while streamlining management. Most importantly it would reduce the risk in acquisition and force generation of operational platforms.

### **Cost Assurance and Risk Management**

Accurate cost estimation is vital to giving government confidence in its decision making on Defence capability. Our experience in providing cost assurance support to the Force Structure Review, is that the models underpinning cost estimates are of variable quality and are not standardised. They are produced internally and can contribute the ‘conspiracy of optimism’ between customer and supplier, both of whom have a vested interest in getting ‘their’ project through the ‘Gate Review’ process and into the Defence Capability Plan (DCP). The resultant risk, particularly in highly technical and complex projects, can manifest in cost and schedule ‘blow outs’.

**QinetiQ** provides Cost and Risk subject matter expertise to the UK MoD Cost Analysis and Assurance Service (CAAS), and through CAAS to the wider MoD acquisition and support business. We provide proprietary modelling software and our experts act as Technical Coaches to department personnel, helping to develop and implement best practice. We provide expertise across all domains (Maritime, Land, Air), designing and implementing Cost and Risk programmes for Project Teams at all stages of the acquisition and support lifecycle. We also supplement internal resources to fill capability gaps, provide surge capacity and undertake discrete activities. QinetiQ conducts Quantitative Risk Analysis for CAAS, using Monte-Carlo probabilistic modelling to assess cost and schedule performance through conduct of Schedule Risk Analysis and Cost Risk Analysis for projects being submitted for approval at Main Gate (equivalent of Second Pass). We believe, in common with the Kinnaird Review<sup>2</sup> that investment prior to Second Pass approval can significantly reduce the risk of cost and schedule slippage during acquisition.

**Reform of the Capability Lifecycle** A range of Defence reviews have commented on the need for independent scrutiny to help drive out project cost and schedule over-runs. Mortimer, Black and the ANAO made recommendations to Defence underscoring the need to ensure that quality assurance frameworks are strengthened and maintained.<sup>3</sup> These recommendations emphasise the value of independent assessments to identify and remediate the technical and process risk that threaten project performance.<sup>4</sup>

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<sup>2</sup> Kinnaird recommended that 15% of acquisition cost should be expended prior to Second Pass in order to de-risk acquisition.

<sup>3</sup> Foreign Affairs, Defence and Trade References Committee, Procurement Procedures for Defence Capital Projects, August 2012 pages 135, 143 and 152.

<sup>4</sup> Department of Finance and Administration, Guidance on the Gateway Review Process – A Project Assurance Methodology for the Australian Government, Financial Management Guidance FMG 20, August 2006, p12.

The DMO Gate Review process mirrors similar procurement processes in other nations and is an acknowledged strength of the current system. However, while the process is sound, there remains a concern that all of the players institutionally 'have skin in the game', including the Capability Investment and Resources Division (CIR Division) and DSTO. So the question remains, to what extent any review body housed within the organisation under review will be able to deliver independent scrutiny and contestable opinions?<sup>5</sup>

One option would be to constitute an independent scrutiny process that gives the reviewers the 'top cover' they need to allow them full access to project data from across the Defence/industry Enterprise. This body, responsible to the Minister for Defence [through] the Secretary and CDF<sup>6</sup> could be empowered to provide the robust, frank and fearless assessments and recommendations necessary to allow informed decision making.<sup>7</sup> The idea of such an Independent Review Board is not new and reflects the vision of the "scrutiny community" envisaged by Bernard Gray in his 2009 Review of UK Ministry of Defence acquisition.<sup>8</sup>

The ANAO notes that the current process involves multiple separate Defence groups administering isolated quality assurance review processes characterised by differing terms of reference and to differing standards.<sup>9</sup> This approach does not appear to provide the long-term continuity throughout the capability lifecycle required to identify and advise on the impact of decisions on risks to cost, schedule, fitness for purpose, sustainment or disposal.

**QinetiQ** believes that the assurance of capability delivery would benefit from a single independent review process aligned to a single line of accountability held by the Capability Manager and spanning the full capability lifecycle. This holistic and horizontally integrated approach is likely to realise the higher order technical and project benefits falling out of a robust quality assurance framework.<sup>10</sup> The ability to drive out costs and drive in efficiency then, stems not only from an enhanced ability to de-risk capability delivery, but also in the reduction of administrative overheads associated with the management of multiple review boards.

### ***The Commercialisation of DSTO***

The Commission of Audit highlighted the potential for outsourcing DSTO, building "...on the United Kingdom's experience in privatising QinetiQ". However, it is worth noting that DSTL + QinetiQ does not map directly across to DSTO. A genuine 'apples-apples' comparison would need to encompass all the agencies delivering research and development and test and evaluation services including those resident in the uniformed services and DMO as well as agencies such as the Defence Materials Technology Centre (DMTC), the Rapid Prototyping, Development and Evaluation Program (RPDE), the Defence Industry Innovation Centre (DIIC) and those elements of defence funded research and development carried out by the Commonwealth Scientific and Industrial research Organisation (CSIRO). The very diversity of these organisations indicates that Defence has already set out on the

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<sup>5</sup> Foreign Affairs, Defence and Trade References Committee, Procurement Procedures for Defence Capital Projects, August 2012, page 163.

<sup>6</sup> The Thread Through Theory: Partnering for the Assurance of Stronger Defence, QinetiQ, January 2014.

<sup>7</sup> Ibid.

<sup>8</sup> Gray, Bernard, Review of Acquisition for the Secretary of State for Defence, an Independent Report by Bernard Gray, October 2009, page 37 and 139.

<sup>9</sup> Australian National Audit Office, Gate Reviews for Defence Capital Acquisition Projects, 26 June 2012, page 45.

<sup>10</sup> The Thread Through Theory: Partnering for the Assurance of Stronger Defence, QinetiQ, January 2014.

path to commercialisation, but has not yet necessarily been able to unlock some of the commercial benefits in doing so. QinetiQ would argue that an holistic approach should be taken, which first identifies the core of defence science, research and development that must for reasons of security or sensitivity be retained in public ownership. Thereafter, a view should be taken on those areas that have already in part been commercialised, before developing a model for the remainder. In sum, DSTO should focus only on those areas where security or sensitivity demands it, or that couldn't be delivered more effectively or efficiently elsewhere.