



DEFENCE WEEK

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Annual RPDE Invitation to Participate

Defence Materiel Minister Dr Mike Kelly has called on Australian companies to participate in complex capability problem solving for Australian warfighters by announcing the latest 'Invitation to Participate' in Defence's Rapid Prototyping, Development and Evaluation Program (RPDE).

"RPDE was established to help resolve difficult and challenging problems in the delivery of

capability to the warfighter and continues to break new ground in the areas of cooperation and collaboration between Defence and the private sector," Dr Kelly said.

RPDE is a unique collaboration between industry, academic institutions and Defence. With more than 230 participants from defence industry, the academic sector and government agencies, this latest Invitation to Participate is seeking to expand on this pool of expertise.

The 2010 Defence Industry Policy, Building Defence Capability, highlighted the importance of the RPDE program to Defence, particularly in supporting current operations.

"RPDE can accelerate change and harness Australian industry's intellectual capital unlike any other institution," Dr Kelly said. "It is a world leader in its field and an organisation of which Australia can be very proud. The commitment by the participant companies to work collaboratively with Defence helps ensure that our servicemen and women get the best capability possible."

Any organisation responding to the Invitation to Participate must demonstrate expertise and skills in niche capability areas and address specific membership criteria. Prior Defence experience is not a requirement and there is no cost to join the Program.

Applications close 1300 hours (AEST) August 30, 2013. Applicants will be notified of the outcome in mid October. Applications and the Invitation to Participate (ITP) Pack are available from the RPDE website: www.rpde.org.au/publications





Defence science scholarships for female students

The Defence Science and Technology Organisation (DSTO) is now offering scholarships in science and engineering for female high school and undergraduate students through three of Australia's leading universities. The participating universities are the Australian National University, the University of New South Wales and University of Adelaide.

Each of the three universities will award four scholarships to female students enrolled in undergraduate programs in either engineering, computer science, physics, chemistry or mathematics. The scholarships will be available from second semester 2013 (July), over a four year study period. The students will be mentored by DSTO scientists for the duration of their studies and undertake projects relevant to DSTO.

Selection will be made on the basis of academic merit either through an applicant's Year 12 school results or undergraduate results. Other factors such as interest in a career in Defence,

community leadership, involvement with extra-curricular activities and referee reports will also be taken into account.

Scholarship students who have completed a minimum of two years full time study will also have the opportunity to participate in DSTO's Summer Vacation program. Further information on the new scholarships is available at http://www.dsto.defence.gov.au/female_student_scholarships/

2nd annual ADM Defence Support Services Summit

Date: 19 September 2013, Hyatt Hotel, Canberra

Enquiries: Jamie Burrage, Tel: +61(2) 9080 4321;
Email: Jamie.burrage@informa.com.au





BAE Systems UK awarded contract for fast jet trainer upgrade

BAE Systems UK has been awarded a multi-million dollar contract to upgrade the RAAF Lead-In Fighter Hawk fleet.

This upgrade is based on a later version of the aircraft developed for the UK Ministry of Defence.

Both BAE Systems UK and **BAE Systems Australia** have been working closely with Defence to define the scope of the upgrade, leveraging off previous Hawk development programs. Australian industry will also be engaged, ensuring compatibility with the current Lead-In Fighter training capability, construction of simulator facilities, modification of the Hawk Fleet, and in-service support of equipment.

The contract to BAE Systems UK, the manufacturer of the plane, is for five years but could be extended to 2026. It is worth nearly \$394 million over the base period.

Australian industry will also be engaged, ensuring compatibility with the current lead-In fighter training capability, construction of simulator facilities, modification of the Hawk fleet, and in-service support of equipment. Work will be performed by BAE Systems Australia's facility in Williamstown, New South Wales.



New lightweight counter-IED system

UK's Pearson Engineering showed its Super Light Weight Roller (SLWR) system for the first time at the 2013 Defence Vehicle Dynamics

(DVD) exhibition in mid-June, installed on the front of a Navistar Defence Husky 4x4 protected vehicle, supplied to the UK Defence Equipment & Support organisation.

Pearson's previous Self-Protection Adaptive Roller Kit (SPARK) has been deployed in large numbers with the US Army and Marine Corps, but users identified a requirement for an optimised roller that could be installed on some of the lighter **Mine-Resistant Ambush-Protected-type (MRAP)** vehicles deployed on operations.

The sale of one of the company's core products, the **Self Protection Adaptive Roller Kit (SPARK)** system, also in service with the Australian Army in Afghanistan, is an example of how this approach pays dividends. SPARK is a modular mine roller system designed to be mounted on wheeled and tracked vehicles. It is designed to

trigger IEDs in front of the host vehicle, protecting it and its occupants. As a result of this pioneering approach, Pearson Engineering was the region's sole winner of **The Queen's Award for Enterprise in Innovation** in 2012.

When the US army was looking for a system to help tackle the emerging **Improvised Explosive Device (IED)** threat to soldiers and vehicles, responsible for almost 40% of US casualties in Operation Iraqi Freedom, they were able to turn to Pearson Engineering, which had already developed the SPARK product to meet such a problem. Major contracts soon followed and the rollers have been used extensively in Iraq and Afghanistan and, having triggered hundreds of IEDs that would otherwise have detonated under the vehicles, saving the lives of many allied soldiers.



Quickstep appoints non-executive director

Quickstep Holdings has appointed Nigel Ampherlaw as an independent non-executive director of the company.

Following three years on the Board **David Wills** has retired as a non-executive director and as Chairman of the Audit, Risk and Compliance Committee.

Ampherlaw's appointment and Wills' resignation are effective immediately.



ADM Online: Weekly Summary

A summary of the latest news and views in the defence industry, locally and overseas. Check out our webpage for daily news updates on the *ADM* home page and make sure you bookmark/RSS this for a regular visit.

This week, the first of 24 Australian **MH-60R Seahawk Romeo helicopters** has successfully completed its first test

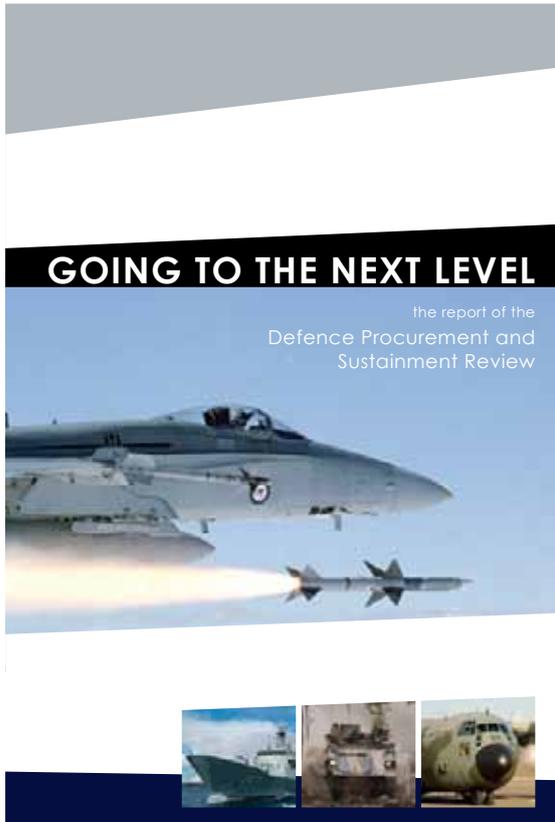
flight.

It was announced that the reforms carried out on the maintenance of Defence's fleet of 12 **C-130J Hercules** transport aircraft have delivered the equivalent of an extra aircraft being available for missions.

And, the US Navy has deployed the **MK18 Mod 2 Kingfish underwater unmanned vehicle** for operations in the 5th Fleet area of responsibility, following more than 30 sorties over 15 days of mock deployment testing in the Gulf of Mexico.



Defence acquisition



Defence acquisition reform roundup

Tom Muir

Tom Muir

Back in 2008 David Mortimer presented his findings on Australian defence procurement having identified five principal areas of concern.

These included:

- inadequate project management resources in the Capability Development Group,
- inefficiencies in the processes leading to government approvals for new projects,
- personnel and skill shortages in the DMO,
- delays due to industry capacity and capability, and

- difficulties in the introduction of equipment into full service.

In all, Mortimer made 46 recommendations, most of which were accepted and implemented.

Subsequently further Defence procurement reforms have been introduced aimed at improving project management, minimising project risk and identifying problems early. And while the extent of reporting on **Major Projects** by the **DMO** reflects positively on its pursuit of better acquisition outcomes, at the same time the range and number of **Projects of Concern** has the appearance of an ongoing monitor of the success or otherwise of acquisition reforms.

Following are reports on UK and US efforts to improve defence acquisition.



Reforming the UK's defence acquisition system

The UK Defence Reform Bill - which is intended to lead to legislation to reform both single-source procurement practices and the structure of the Defence



Equipment & Support (DE&S) procurement body - was published on 4 July. The bill marks a formal step towards reforms outlined in the 10 June White Paper, 'Better Defence Acquisition: Improving how we procure and support defence equipment'.

Reforming the Defence Acquisition system is a key part of the Defence Transformation program. The Materiel Strategy and its supporting work has identified three root causes of the problems that have been experienced by the system for decades: the overheated Equipment Program; an unstable interface between those parts of the MOD which request equipment and support services and the Defence Equipment & Support organisation (DE&S) which delivers them; and a lack of business capability (processes, tools and skills), including management freedoms.

While the recent work to balance the budget has addressed the first problem, there is little doubt that without systemic change to resolve the latter two issues, the substantial work to deliver a balanced program will be undone.

The three problems together are estimated to waste hundreds of millions of pounds per annum – the proposed reforms will significantly reduce this waste, generating benefits to the Armed Forces and the taxpayer.



Performance of the US Defense Acquisition System, 2013

Poor management is by far the biggest cause of huge cost overruns in the Defense Department's major weapons programs, Pentagon acquisition chief Frank Kendall writes in a new 126-page assessment, his first annual report on the performance of the defense acquisition system.

The report lays out the dominant factors behind soaring costs in DOD programs based on a three-year look at 18 programs so expensive they triggered "critical" Nunn-McCurdy cost breaches under federal law. *InsideDefense.com* obtained an advance copy of the report, which was posted online.

"Far and away the most significant factor in these large overruns is poor management performance," Kendall wrote in a July 5 internal email to DOD acquisition officials. "We can do better, and this report is a tool to help us achieve that end as all of us involved in defence acquisition, in government and in industry, work to continuously improve the outcomes we achieve."

Ineffective management was deemed a root cause of cost overruns in 10 of the 18 cases, or 56 per cent of the time. DOD's Program Assessment and Root Cause Analysis



Office found management problems related to systems engineering, contractual incentives, risk management and situational awareness.

Taken together, measuring the performance of defence acquisition provides objective, quantitative information on our current performance. The following insights provide some broader perspectives and considerations. These should inform and enable stable improvement in our overall acquisition performance.

Following are some excerpts from the report. -*Inside Defense*

Acquisition as an endeavour

The report notes that the time required to acquire next-generation capabilities is often longer than the strategic threat and technology cycles these capabilities are meant to address. Performance (good or bad) in planned defence acquisition is intertwined with cost and schedule implications from unplanned responses to these external demands. This is not an excuse for cost and schedule growth, but an observation from first principles that changing threats and needs can add costs and delays relative to original baselines as ongoing acquisitions are adjusted.

Acquisition is about risk management—not certainties. Especially for major weapons systems acquisitions (which almost always involve research and development), uncertainties imply cost, schedule, and performance risks relative to early estimates. These risks diminish as we move from research to development through production to sustainment, but their realisation may result in cost and schedule growth. These risks also require use of different management tools (such as the right contract types and incentives) at different stages to mitigate risks and motivate industry to achieve the lowest possible total price to the government. But it is important to remember that developing technologically superior military capability is not a risk-free endeavour.

Intelligent acquisition is key with analysis confirming the need for informed judgments. No single contract type is best. Analysis of past acquisitions shows that, when controlling for other factors that contribute to contract cost performance, contract type alone (e.g., fixed price or cost-reimbursable) does not predict lower cost growth in development or early production contracts. This suggests that relying on contract type alone to achieve better affordability outcomes will not likely be successful. -*Performance of the Defense Acquisition System, 2013 Annual Report. Washington.*



Is cost growth always bad?

Included in the Pentagon's acquisition performance report is the following excerpt from an article by Col. Mark F. Cancian (USMCR, ret.) illustrates these larger external debates. While the acquisition of the original six Navy frigates beginning



in 1794 is a case where value can be argued, there certainly are others for which it cannot.

Discussions about cost growth presume that it is always bad and that policy makers should take drastic actions to prevent it. A cautionary tale from the early days of the Republic shows that the situation is more complicated than the usual morality play about shortsightedness and incompetence.

In 1794, the young US authorised the construction of six frigates (US, President, Congress, Constitution, Constellation, and Chesapeake). Intended to be the major units of the new Navy, the ships represented the aspirations of an ambitious but inexperienced institution. In execution, all the pathologies of today's weapon systems acquisition were evident:

An innovative but unconventional design was criticised as "extravagant."

A multi-mission requirement for irregular warfare (anti-piracy) and high-intensity warfare (against major powers such as Great Britain) put conflicting demands on the design.

Use of exotic materials delayed construction and raised costs. (Key hull components required live oak, which had to be imported from inaccessible coastal areas in the South.)

A divided political establishment argued over the need and cost.

Contracts were spread around all the northeast states to ensure political support.

Cost growth caused schedule slippage and program instability.

Congress, alarmed at the costs and delays, conducted inquiries and railed against waste.

But the story did not end there. In service, the ships were spectacular successes. Over the course of their careers, they fought 11 combat actions, winning 8 and losing 3. The exploits of the Constitution particularly encouraged the young nation. These successes were achieved while badly outnumbered and fighting against the two best navies in the world—the British and French. How was this possible?

The advanced design that caused so many problems during construction also gave the ships a decided advantage over other ships in their class. They could defeat any ship with comparable speed and outrun any ship that was more powerful. The unexpectedly high cost bought capabilities that proved important in war.

Substitute for frigates the M-1 tank, F-15 fighter, or Ohio-class submarine and the story moves forward two centuries. All of these programs had unexpectedly high costs, but proved world class in operation. The existence of cost growth therefore does not necessarily mean that the acquisition was a mistake.

International



BMT's RAMtr@ck system of choice for Swedish

BMT has announced its latest contract with the Swedish Defence Materiel Administration (FMV). This will include the organisation's robust and intuitive, management



information system, RAMtr@ck, which will deliver total visibility of the utilisation and performance of over 15,000 high value training and simulation assets.

To date, all stakeholders involved in the procurement, operation and support of the equipment have used BMT's web-enabled system to measure the in-service performance of training and simulation systems being used, such as FMV's Leopard II Main Battle Tank Turret Trainers and Command Team Trainer and the CV90 armoured vehicle trainer. This contract has now been extended to cover an additional portfolio of assets which include FMV's Live Firing Ranges, of which there are more than 140 distributed across 19 wide-spread geographical locations in Sweden.



SeeByte's software chosen for Predator ROV

Tom Muir

SeeByte have announced that the Predator ROV will now be fully integrated with SeeByte's market-leading SeeTrack CoPilot software. This collaboration will allow Seatronics to offer the

advanced applications available through SeeTrack CoPilot as an integrated package and as a rental option for their customers.

David Currie, managing director at Seatronics commented: "As the builders and global distributors of the Predator Inspection Class ROV, Seatronics were keen to find a software package to complement the abilities of the vehicle and make handling the ROV more user-friendly for all pilots. The software allows control and flexibility of the vehicle, meaning our customers will have the time and confidence to focus on the job at hand, and not on piloting the ROV."

SeeTrack CoPilot permits pilot controlled auto-transit and stop-and-hover, whilst providing automated sonar tracking and movement relative to a target.

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FORTHCOMING EVENTS

For a full list of defence and industry events, head to **ADM's** online events page at www.australiandefence.com.au

DSEI

DATE: 10-13 September, 2013, ExCel, London

ENQUIRIES: Web: www.dsei.co.uk

DSEI is the largest fully integrated defence and security show in the world, featuring Air, Naval, Land and Security show content. Based in ExCeL, London every two years, the event provides unrivalled access to key markets across the globe.

ADM will
be in
attendance

SimTecT

DATE: 16 - 19 September, 2013, Brisbane Convention and Exhibition Centre, Queensland

ENQUIRIES: Web: www.simtect.com.au

SimTecT is the annual Simulation Technology and Training Conference held by Simulation Australia. Since its inception in 1996, SimTecT has grown to become Australasia's premier simulation conference for industry, government and academia.

ADM will
be in
attendance

2nd annual ADM Defence Support Services Summit

DATE: 19 September, 2013, Hyatt Hotel, Canberra

ENQUIRIES: ADM Events - Jamie Burrage, Ph: 02 9080 4321;

Email: Jamie.burrage@informa.com.au

Web: www.admevents.com.au

The Defence Support and Reform Group has an annual budget of \$3.9 billion, with an asset base in excess of \$20 billion and around 2,600 civilian and 1,100 military staff. It provides a diverse range of products and services to support over 100,000 ADF personnel and Australian Public Service (APS) employees.

ADM will
be in
attendance

Pacific 2013

DATE: 07 - 09 October, 2013, Sydney Convention & Exhibition Centre, Darling Harbour

ENQUIRIES: Web: www.pacific2013imc.com

Pacific 2013 IMC provides a unique opportunity for people involved in maritime and naval affairs around the world to discuss the latest

ADM will
be in
attendance

maritime developments in design, naval architecture, engineering, science and technology. With the concurrent Maritime Exposition, the event will provide a meeting place for industry representatives to exchange ideas and to establish personal and business contacts.

SIA 2nd Submarine science, technology and engineering conference

DATE: 15 - 17 October, 2013, Adelaide

ENQUIRIES: Web: www.submarineinstitute.com/sia-conferences/

The peak event in Australia for engineering of what is one of the most complex Defence assets - conventional submarines. In addition the conference covers the full range of underwater technologies, many of which are relevant and in use for under-sea resources exploration and exploitation. This conference also provides a national focus for shipbuilding and land-based research, development, test and evaluation and systems integration relevant to submarines.

ADM will
be in
attendance

Safeskies

DATE: 16 - 17 October, 2013, Hotel Realm Canberra

ENQUIRIES: Web: www.safeskiesaustralia.org

Safeskies Conferences is an Australian based not-for-profit organisation which holds a biennial aviation safety conference in Canberra. The 2013 conference has as its theme 'People and Technology', and speakers will probe some of the issues surrounding this theme, including UAVs, rotary wing aircraft developments, pilot training and automation, cabin safety, the latest technology in large passenger jets and a case study from the Air France flight 447 accident investigation.

ADM Northern Australia Defence Summit

DATE: 29 Oct - 30 October, 2013, Darwin Convention Centre

ENQUIRIES: ADM Events - Jamie Burrage, Ph: 02 9080 4321;

Email: Jamie.burrage@informa.com.au

Web: www.admevents.com.au

Bringing together key figures from the NT Government, senior military figures, and senior industry representatives, this conference is all about the continuing development and support of Defence in the Top End. Hear about the current and new initiatives offered by Government and what industry can bring to support Defence's strategic objectives..

ADM will
be in
attendance

