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**TO THE SYSTEMS ENGINEERING, TEST AND EVALUATION
CONFERENCE 2003**

**DMO REFORM – IMPLEMENTING A SYSTEMS
PHILOSOPHY IN THE DEFENCE MATERIEL
ORGANISATION**

0900, 29 OCTOBER 2003

CANBERRA

(Present Slide 1 – Title Slide)

INTRODUCTION

Thank you very much for inviting me today to talk to you about how the Defence Materiel Organisation – the DMO – is implementing a systems philosophy as a key part of its reform agenda.

I could really talk to you about the DMO's reform agenda and its various initiatives all day, because we are driving reform through numerous measures targeted at our people, Industry, our financial and IT systems, our business processes, our structure, our relationships with other areas in Defence – you name it.

However, for the purposes of today, I will give you a broad overview on why we are driving so hard on our reform agenda and then I will focus on an area that I am particularly passionate about –systems engineering. I'll outline the systems engineering improvement program currently underway in the DMO and show how a systems philosophy has underpinned the majority of our recent policy initiatives.

OVERVIEW

Since the late nineties, the DMO has been the subject of too many reviews, audits, evaluations and enquiries to count. In fact, the outcome of the latest review, the Kinnaird review, will see the establishment of the DMO as a prescribed agency to facilitate the DMO's evolution towards a more business like identity.

While I won't dwell on that today because the full implications of that review are still to become clear I will draw some key linkages between the Kinnaird review and some of our reform activities. There is no doubt that what this and other reviews underscore is the fact that the DMO is constantly driving towards excellence through continuous improvement driven from both internal and external factors.

In most cases, the focus of these reviews has been on the way we acquire and sustain capabilities, particularly large and complex capabilities – which is the majority of capabilities these days!

We've addressed the recommendations from these reviews through various reform and improvement initiatives in areas that include:

- the establishment of a standard, DMO-specific process framework;
- systems engineering;
- software acquisition management; and
- contracting.

Over the years, we have standardised and improved the way we do business. But in achieving tangible results, we have not rested on our laurels, we recognise that we always need to be looking to ways to improve the way we work.

Before I go into the background and progress so far in implementing a systems philosophy, I want to set the scene for you to get an understanding of why we needed to change the way we do business.

The driving force behind our reform program was that the Government and the Australian Defence Force had lost confidence in our ability to do our core activities well, given the findings of the various audits, reviews and independent enquires that have looked at our perceived lack of project management skills and schedule blow-outs. Our relationship with Industry, which is a critical part of the Defence materiel management process, was also not the best. Our Industry counterparts all too often don't deliver to our expectations. If Industry is not successful then nor are we.

Unlike the US, which has separate acquisition systems for each of the armed forces, and the UK that has a substantially amalgamated sustainment process, but a separate acquisition organisation, the DMO charter is to equip **and** sustain the ADF.

In other words, as a single entity, the DMO manages capability from the time of its acquisition to the time of its disposal – or from cradle to grave as it is commonly stated. Although it is advantageous to have a single entity responsible for acquisition and sustainment, it also sets up the challenge of creating a single integrated environment, which includes integrated processes, integrated infrastructure and an integrated way of doing business.

To give you a flavour of the **magnitude** of the task we have before us, I would like to share with you some statistics on our business. In the financial year just passed, the DMO consumed in excess of 30 percent of the Defence budget by spending just under \$3 billion on more than 290 capital equipment projects and a further \$1 billion on maintenance for military equipment. We currently manage capital investments valued at \$9 billion, hold over \$3 billion of inventory and oversee more than 60 percent of Defence's asset base.

All this is done by some 8,500 people – of which approximately two-thirds are civilian and one-third are military – in over 50 locations throughout Australia and the rest of the world. If the DMO were a private sector business, in terms of assets, it would rank as one of Australia's top ten companies.

In order to get an understanding of the **complexity** of the task, bear in mind that the vast majority of Defence's capital equipment:

- is required to operate in a highly complex integrated environment;
- is highly software intensive;
- is expensive to procure and sustain; and so
- is complex to procure and sustain.

STANDARD PROCESS FRAMEWORK

I would now like to move onto what we are doing in establishing a standard process framework for the DMO. The need to develop this process framework evolved from evaluation of how we had implemented the Project Management Methodology – or PMM as we call it– in the DMO.

The evaluation identified a number of problems with the implementation of PMM. The analysis identified that generic

processes did not adequately reflect the role of Government in determining what is required. Acquisition management issues such as supplier selections, supplier management and performance measurement were missing. In addition, there were the issues of logistics, financial legislation accountabilities, people management, safety and estimating that also weren't well articulated in our processes.

These shortcomings in PMM were identified for inclusion in what eventually became the Standard Acquisition Management System – or SAMS for short. In keeping with the acquisition and sustainment charter of the DMO, SISMS – or Standard In-Service Management System – soon followed. PMM has now been updated to ensure consistency with SAMS and SISMS and has gone back to what it was originally intended to be, which is the DMO's standard process for project management.

For processes to have any meaning, they need to be woven into every part of a business. The Materiel Acquisition and Sustainment Framework – MASF – is the umbrella for all policy and process development for acquisition and in-service capability support in the DMO and encapsulates SAMS and SISMS. MASF sets the scene – and the DMO Business Model is the starting point.

DMO Business Model

(Present Slide 2 – DMO Business Model)

The development of the DMO Business Model was a key initiative of the DMO reform program. The core processes shown in green are the processes that are fundamental to the DMO. These processes cut across the whole organisation. Since the model was endorsed by the DMO Executive work has been underway to map core and enabling business processes.

(Present Slide 3 – SAMS and SISMS)

Our effort has largely gone into mapping the acquisition and the in-service support processes. The next goal is to tackle the processes for financial and people management.

As we develop core business processes, we are also incorporating the enabling processes that support our business. So our overall aim is to define all core and enabling business processes for the DMO, so that everyone working in the organisation has a clear understanding of the processes required to undertake their work, the competencies required to undertake those processes and a standardised set of tools to assist process implementation.

DMO Quality Management System

(Present Slide 4 - QMS)

As the system matures, business units within the DMO will be able to mine corporate level processes and link their systems to the corporate system.

The linking of the Quality Management Systems allows for bottom-up processes to influence corporate standard business processes being developed top-down. This means every business unit in the DMO can share process improvement ideas in a structured way. Our aim is to have the corporate level Quality and Environment Management System in place by the end of 2004.

To support the development of outcome-focused standard corporate processes, we are progressively developing acquisition and sustainment policy, tools and training programs, which are being integrated into the SAMS and SISMS process models.

One area in which we have received criticism in the past is the management of the project from the project office side. Clearly, it is as important for our project offices to manage their side of the project as it is for the contractor to manage its side.

Improved Project Scheduling and Status Reporting

So about two years ago, I launched the Improved Project Scheduling and Status Reporting – or IPSSR – project.

The process that IPSSR sets up for projects is based on the same methodologies that we ask contractors to use to:

- develop good quality work breakdown structures that ensure technical control;
- develop a schedule against the work breakdown structures;
- allocate resources in terms of our own people's time to those work breakdown structures;
- integrate our work breakdown structures with our risk treatment plans; and
- integrate our work breakdown structures with those we get from Industry.

This allows our project offices to use an earned value approach of looking at cost and schedule variances to monitor their project performance in a more comprehensive way.

IPSSR was trialled on a few high value projects within my division with the results being so positive that we now have a flood of projects putting their hands up to be IPSSRed.

In a recently conducted independent evaluation, IPSSR was overwhelmingly given the thumbs up by project managers for providing them with greater control.

To get better outcomes, we not only need better processes, but better skills in interpreting and managing what the processes and performance measurement systems are saying. We're mainly dealing with experience and training here. But I also think we're dealing with some cultural barriers too, because people don't want to say early on in the piece if a project is going to be late – that could mean the end of the project. So, again it relies on a cultural shift in the DMO and Industry away from the blame game, to an environment where responsibility is shared.

Our Project Governance Boards go some way toward addressing this issue of culture, because they provide the opportunity for project directors to speak openly and honestly about the pros and cons of projects and be subjected to rigorous questions on project performance and viability issues. Recognising the success of these Boards so far, Kinnaird has

recommended that they be extended to cover in-service support.

But as I mentioned earlier and as highlighted by Kinnaird, project success is dependent on the skills and capabilities of our project managers. To this end, we are now establishing a project management certification framework. This framework will be based on the US Defense model and will identify levels of education, training and experience in project management that will be mandated for the management of projects with different levels of complexity. While this approach was not recommended by Kinnaird, it will nonetheless be a key plank in how we respond to his observations on our project management capability.

A mandatory component of the certification framework will be required levels of software and systems engineering education, training and experience that are applicable to people managing complex safety and mission critical software intensive projects.

SYSTEMS ENGINEERING IN THE DMO

SE Overview

(Present Slide 5 – SE Definition)

The slide I'm now showing you is a definition of systems engineering that I believe is a great summary of what we must aim for in the DMO. It clearly highlights that a well defined systems engineering framework should be the basis of everything that we do in the DMO.

Unfortunately, until recently that hasn't been the case. I believe that this lack of a coherent and integrated systems philosophy has been a major factor in our project delivery problems.

SE Reviews

(Present Slide 6 – SE Reviews)

Between 1996 and 2001 five major reviews looked at the application of systems engineering in the DMO and its predecessor organisations. The reviews ranged from project-specific audit reviews through to organisational-level reviews of our systems engineering processes. Despite their different focus a number of consistent themes emerged. Generally the reviews concluded that:

- the level of SE capability in Defence, is low to very low, with a limited number of localised areas of expertise;

- the application of SE processes by project offices is highly variable, ranging from practically non-existent to reasonable;
- requirements management and requirements development processes are inadequate; and
- the product structure and contractor work breakdown structures were inappropriate.

The 2001 Management Audit Branch audit of the Mine Warfare Command Support System project recommended that the DMO introduce measures to improve Systems Engineering skills in the organisation, particularly within projects requiring intensive software development. As a result of this recommendation, I started the Systems Engineering Improvement Program in February 2002.

Systems Engineering Improvement Program

(Present Slide 7 – Systems Engineering Improvement Program Overview)

The current phase of this program is focussed on the front-end phases of the Defence Capability Systems Life Cycle, and will concentrate on the highest priority areas and provide policies, processes and guidance for:

- Requirements Engineering;
- Engineering Management;
- Technical Control; and
- Systems Engineering Manual, Training and Mentoring.

By introducing consistent systems engineering tools we're aiming to ensure that Defence capabilities are managed as complete systems that provide fully integrated solutions to meet the users' needs. Our systems engineering philosophy is essentially a series of risk mitigation processes and activities that help the DMO achieve the desired outcomes within specified capability, cost and schedule bounds.

Requirements Engineering

Our main focus to date in the systems engineering improvement program has been on requirements development. My 20 years of experience in Defence has shown that a robust capability development process is among the most critical components of a successful acquisition.

In the past, Defence capability requirements for some projects were inadequately defined before acquisition. So, when the capability subsequently evolved, the scope tended to change, which caused the inevitable cost increases and delivery delays. In other cases, when the capability was defined at an early

stage, it was sometimes done without reference to cost and risk drivers. Again, this significantly increased the risk of cost and schedule overruns.

We did some analysis of our work and, certainly in my division, we found that a large number of the delays in the projects getting to contract were because the DMO had to do substantial work in further defining requirements.

To address this issue, we have been working with the capability staff on the guidelines for developing Operational Concept Documents, Function and Performance Specifications and Test Concept Documents.

Our focus on requirements definition has come from a number of sources, but particularly through our consultations with Industry. Industry wanted us to improve requirements development and they wanted to understand how things were going to be used, rather than just relying on the specifications. As part of that process, we also had to ask ourselves if our function and performance specs were the right way to go.

We have improved our requirements analysis process through operational concepts and gained a greater understanding of the functions that need to be performed. The next part is obviously the Function and Performance Specifications.

Thanks to the new approach, we have better requirements definition before we go to Government for approval. This gives us a better understanding of the costs, the risks and the likely schedules that it will take to deliver on the requirements.

It also means that the DMO has a much more detailed definition of what is required from the capability staff, rather than high-level statements of intention and capability. As a matter of routine, capability requirements are now accompanied by operational and sustainment concept documents that clearly articulate how the equipment will be used and supported.

This will also make the sell-off of the capability from the contractor to the DMO and from the DMO to the user, more straightforward because it will be done by validating the fitness for purpose of the capability against the Operational Concept Document.

Implementation of the Kinnaird recommendations will see a further strengthening of the capability development and assessment process. A greater investment in requirements development up-front should ensure more reliable cost and schedule estimates, and risk assessments before projects are handed to the DMO for acquisition and sustainment.

Engineering Management

Engineering Management policy that we are developing under the Systems Engineering Improvement Program will provide the policy, guidance, procedures and tools for project staff to use during the Acquisition Phase.

Our policy aims to support Project Office staff in assessing if all Statement of Work requirements within a contract are fulfilled. The policy will be integrated with the DMO acquisition and sustainment practices and the processes detailed in ASDEFCON, SAMS and SISMS.

At this stage, we have released a System Review Guide for the Australian Defence Contracting Template for Strategic Materiel, and are currently developing:

- Verification & Validation Policy for the DMO; and
- Policy for the development of a Commonwealth Systems Engineering Management Plan.

Systems Review Guide

ASDEFCON(SM) requires Mandated System Reviews to be conducted, together with other Verification and Validation (V&V) methods which represents an going series of risk-mitigation

activities. These activities run throughout the life of a capability as part of the overall assurance strategy. The purpose of the Systems Review Guide is to provide guidance for the management and conduct of System Reviews in accordance with (ASDEFCON(SM)). It clearly defines the Australian Government strategies for activities and issues to address before, during and after a Mandated System Review. This document is intended to provide assistance to DMO project office staff but not replace DMO policy with respect to the use of ASDEFCON (SM).

The guide provides checklists and guidance covering the pre, during and post event phases with detailed guidance on what is required in each phase.

The System Review Guide addresses reviews including:

- Preliminary Design Review;
- System Design Review;
- System Requirements Review;
- Test Readiness Review; and
- Training Readiness Review.

The Guide underpins the acquisition process to cover the elements of System Reviews. It will improve the effectiveness of attending System Reviews by having DMO personnel prepared to participate in the System Review and be able to

ask the correct and critical questions during the review and provide a process for the management of System Review.

The Guide provides the detailed guidance on how to prepare, attend and finalise System Reviews throughout the Acquisition process.

System reviews are an important V&V method to assist in identifying possible defects early in the design process. For example, it is cheaper and faster to identify the defects through the preliminary design review than it is later in the build or testing of the capability.

We have drawn the information in the Guide from a number of sources, including the ASDEFCON(Strategic Materiel) Handbook, Australian Defence Force (ADF) joint and single service publications, ANSI/EIA-632, Defense Acquisition University publications and the Best Manufacturing Practices (BMP) web site.

Verification & Validation

The DMO Verification and Validation Policy that we are currently developing will align the current DMO Test and Evaluation processes with the Systems Engineering approach of V&V. In The V&V Policy we will focus on the processes and

activities to be followed by Project Office staff prior to, during, and beyond the contract period. It will also define the process for evolving the testing concepts in the Test Concept Document through to the end of the Acquisition Phase.

Acquirer Systems Engineering Management Plan

I imagine that you all understand the role of the Contractor's Systems Engineering Management Plan in describing the Contractor's plans for the conduct and management of a fully integrated engineering program in accordance with the contract. We use the Contractor's SEMP as a benchmark to evaluate the contractor's technical approach, to make technical risk assessments, and to measure progress.

To require a similar level of rigour from the DMO, we are currently developing guidance for our own systems engineering management plan.

We plan to call this document the Acquirer Systems Engineering Management Plan, and it will provide the Project Office with the equivalent direction and guidance on the DMO's responsibilities in relation to the engineering aspects of the contract. While the Project Office is not normally directly involved in the implementation of System Engineering activities for the system, it has important engineering activities to perform

that require planning if we are to properly oversee contractor performance.

Our Acquirer SEMP will support the Acquisition Project Management Plan by detailing the engineering program to be followed by the Project Office in their preparation for solicitation, contract execution, transition and acceptance. The Acquirer SEMP will be the lead technical document within the Project Office's project plans.

Technical Control

For the DMO, technical Control of contracts involves the development of effective product-based Work Breakdown Structures, Specification Trees, technical reviews and schedules. Under this phase of the systems engineering improvement program, the Defence policy on Work Breakdown Structures has been updated to fully define the requirements for WBS to be used in Defence and Industry. We are also developing a WBS application guide for the DMO.

To support these documents, technical Control policy will be fully integrated with the existing DMO business practices and processes and detailed in ASDEFCON, SAMS and SISMS.

Updated DEF(AUST) 5664 – Defence Work Breakdown Structures

In its current form, DEF(AUST) 5664 is both a policy document and a guide for the development of WBSs. We are planning to fully develop each of these functions in separate documents.

DEF(AUST) 5664 will be updated to describe the Defence policy relating to the development of Work Breakdown Structures and will apply to a WBS in any phase of the Capability Life Cycle

The updated standard will be a more comprehensive policy document than the previous edition and will be applicable to both Defence and Defence Industry.

WBS Application Guide for DMO

The new WBS Application Guide for DMO will be a stand-alone document that guides the internal Defence user through the process of creating a WBS at any phase of the Capability Life Cycle. It will provide guidance for a range of examples such as:

- contracted work integrated with internal Defence work
- a strategic acquisition
- a minor mid-life upgrade

- a series of changes across existing platforms and systems

Systems Engineering Manual, Training and Mentoring

Systems Engineering Manual

To cap off the development of the systems engineering policies under this phase of our improvement program, we are going to write a systems engineering manual for the DMO. The manual will provide links to all relevant SE policies, procedures and guidance and will be linked directly with the relevant process reference pages in the SAMS and SISMS process models. My plan is for the manual to be available next year.

Systems Engineering Training

Developing and issuing policy and guidance is only half the battle. As important as these policies and guides are, I believe that the provision of an integrated training and mentoring program is vital to the success of our improvement initiatives. Therefore, an integral part of our improvement program is the provision of training modules designed specifically for DMO staff.

We have developed a four-day Systems Engineering course tailored to the DMO roles in the Requirements and Acquisition Phases of the Capability Life Cycle.

Our course introduces DMO standard tools and techniques to support the application of SE principles when defining and managing projects. Examples from relevant DMO projects and lessons learnt are used to give insights into the principles and their application. The course aims to also build links with the related disciplines of Project Management, Integrated Logistics Support, and Software Engineering.

Systems Engineering Mentors

To ensure DMO staff can readily access advice and assistance on systems engineering, I'm establishing a panel of systems engineering mentors. My plan is that the mentors will be highly experienced Systems Engineers from Industry who are familiar with our new policies. I expect to have the panel available in the first half of 2004.

SOFTWARE ACQUISITION MANAGEMENT

Given software acquisition is probably our most significant Achilles heel, improving how we manage this process has also been very front of mind for us.

While we have experienced considerable schedule overruns with our software intensive projects, we have maintained or contained cost overruns through the use of fixed price contracting. Experience in the US and in commercial organisations around the world is very similar in terms of schedule but quite different in terms of cost.

For example, the US Science Board Study in 2000 showed that only 16 percent of Defence projects in the US were delivered on time. Further, the Standish Group's CHAOS Report on commercial and government software projects in 1994 showed that, in large companies, only nine percent of software projects were delivered on time and within budget. In that report, the average cost overrun for software projects was 189 percent and the average schedule overrun was 222 percent. In our environment, our experience with schedule overrun is very similar but, as I said before, through the use of fixed price contracting, we have been able to contain cost overruns.

Some key issues as to why software intensive capabilities are difficult to acquire and manage go to the fact that software is an intangible product. It is difficult to see, it is difficult to measure and it is often difficult for project people to understand. In addition, the processes we use in the Defence community are relatively immature resulting in unpredictable results.

CMMI

To this end we have adopted the Capability Maturity Model Integrated – or CMMI – to assist us in identifying process related strengths and weaknesses of our suppliers as well as ourselves. The CMMI was selected because of its comprehensive process coverage. Our experience also shows that it lends itself to being applied to any type of organisation, be it a prime systems integrator, a software subcontractor or an acquiring organisation. Our CMMI program has been going for the last three and a half years and over that time we have conducted a total of 22 process appraisals on Industry, in the DMO and on other Defence groups.

A point of interest to note here is that we are not just levying the requirements for Industry's processes to be appraised against the CMMI but are also applying the CMMI on ourselves to measure our own process performance.

Having conducted so many process appraisals, we now have sufficient data to conduct trend analysis and get an understanding of exactly where the process risks lie.

(Present slide 8 – Aggregated Appraisal Results)

This slide presents the aggregation of results from the appraisals conducted over the last three and a half years. As far as the colour coding is concerned, green means that the majority of organisations that were appraised satisfied that particular goal, while red means that the majority did not.

You will notice from the appraisal results shown that project planning, risk management, requirements management and measurement are areas that have been identified as being of immediate concern for the Defence community.

That is not to say that other aspects of the results are not important to us. Rather, the question I have to ask when I look at these results, is “what chance do we have in being able to improve process maturity, when we can’t manage to have solid processes in basic activities such as project planning, requirements management and measurement?”

You can see from the table that in project planning for instance, only 39 percent of organisations that were appraised satisfied the first specific goal of establishing estimates. Even more concerning is that only 22 percent of organisations met best practice requirements for establishing and maintaining project plans.

When you look at these results for project planning in conjunction with the fact that only 39 percent of organisations satisfied the specific goal in requirements management, you start to get an understanding of why Defence projects are continuously in the limelight – for all the wrong reasons!

Another process area that is of concern to me is measurement and analysis, which shows that 31 percent of organisations met the requirements for collecting and reporting measures.

Although that's not a great result, it's nothing compared with 100 percent of the organisations failing to meet the requirements of the first specific goal which looks to them to establish their measurement programs linked to information needs and objectives. Clearly, if we are not measuring, we are not managing our projects effectively.

This sort of quantitative information gives Industry and Defence a much better understanding of what we need to do to improve processes. You will have noticed that I keep using the term “Defence community” because as far as I'm concerned, it is not enough for us to expect one stakeholder group in the equation to solve everyone's problems by improving their processes. This is something that we are all going to have to work on together. The adage that an immature acquirer and a mature supplier – or vice versa – will result in an immature solution,

rings true for us as it does anywhere else in the world. We need to address these problem areas jointly. An example of this is the recently released Draft Electronic Sector Plan, which identifies this very challenge.

As I mentioned earlier though, our Achilles heel in delivering capability to Defence rests with Industry's ability to deliver contracted outcomes especially in software intensive systems. A major focus therefore for the Electronics Sector Plan is to improve the capability of our suppliers in the area of military systems integration and improve the maturity of our systems and processes across the Defence-Contractor boundary.

The establishment of a capability improvement forum is aimed at lifting the capability bar for new acquisitions based on a risk approach. Through this forum, we will be seeking to further our systems engineering and software acquisition reforms in concert with Industry thus ensuring similar levels of process, performance measurement and contract management maturity across the Defence-Contractor interface.

CONTRACTING

All of these reform initiatives have little effect unless we effectively write them into our contracts. Contracting is one area where we have been criticised, not just by Government but

also by Industry for allegedly making things unnecessarily complicated.

Australian Defence Contracting Template

Our old contracting template for capital equipment procurement DEFPUR 101 was criticised for being overly prescriptive, cumbersome and not well suited for the procurement of state-of-the-art software intensive capabilities. So we developed a template for software intensive contracting which is called ASDEFCON (Strategic Materiel). This template provides a standard framework on which we can approach Industry in our tenders and then contract on.

The template was developed in consultation with the technical directors of companies that we deal with regularly. They helped us identify what they believe to be best practice in the approaches that we were using across the DMO. So we brought those together using not only the technical directors of those companies but also some highly experienced systems and software engineers who we brought in on contract, as well as subject matter experts from the DMO.

The template aims to introduce best practice approaches in acquiring software intensive capabilities and provides a contractual framework for the reform initiatives I've outlined.

We are also aiming to reduce the cost of tendering by standardising the type of information that we seek. So when we ask for a project plan, it will now always contain particular information, rather than having unique, individually created requirements. That way, Industry knows exactly what we are expecting well before they put in a tender.

The template is also designed to provide the basis on which we can capture any new reform initiatives and put them in place in terms of the DMO-contractor interface. As well, by having a standard template, we have the opportunity for Industry to contribute to how we might improve, because we are doing things in a consistent way. We should be able to get quite specific on those issues in the template which they believe are working and those that are not, and come up with views on how we might improve.

We are already identifying improvements to ASDEFCON (Strategic Materiel) – we've found that the super-set of contractual and Statement of Work clauses are not needed in all cases. So we are now in the process of developing trimmed down versions of ASDEFCON for In-service Support and Complex Procurement.

The goal is to have a set of pre-tailored contracting vehicles that projects can access, fine tune to suit their requirements

and minimise the cost of doing business for both the DMO and Industry.

CONCLUSION

Today I've only touched on some of the initiatives the DMO has introduced to establish better processes to deliver better outcomes. And importantly, our process reforms are cradle to grave. They focus on requirements definition pre-approval through tender development, the Defence/Contractor interface, and then to sell-off to the end user and to sustainment.

In fact, that's the beauty of events such as these, because they provide us with the opportunity to look at what works and what doesn't, and discuss the pros and cons of existing and future processes.

Despite the fact that we, in the DMO, don't always get it completely on the mark, I think we're heading in the right direction in our attempts:

- to better define the capabilities we need to successfully deliver to the war-fighter;
- to better identify and manage our risks; and
- to better manage our acquisition and sustainment efforts.

With the degree of scrutiny we're constantly under, this is vitally important, because we need to be able to show that we are improving the way do business and that we can deliver better outcomes.

This can only be done with smart and sophisticated processes, which are interpreted and managed in a smart and sophisticated way.

And that, for me, is an endless quest.

Thank you and now over to questions.