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These are changing times and Complex Warfighting is changing the Land Force structure of the Australian Army. With the recent introduction of the Adaptive Army Initiative, it seems that systems acquisition will also need to change to meet the adaptive nature of the Australian Army. The acquisition process may need to produce systems and networks that are as adaptable and flexible as the soldiers who will use them in the Complex Warfighting environment.

Current acquisition processes have historically been linear in nature. Requirements are first generated and agreed upon, systems and networks are then developed based on these requirements and finally the systems are built, tested, trained with and fielded. This process can take 7-10 years to complete. In recent experience large acquisition programmes often find that their systems are unsuited or too expensive to operate for the operational environment they will be used in.

With COTS/MOTS technologies moving at the Information Technology (IT) rate of upgrade (about every 12-18 months) military system acquisitions and upgrades may need to move at a similar pace in order to serve the needs of an the Adaptive Army. The enemy in the conflicts that Australia is engaged generally use COTS/MOTS technologies to perform their tasks. High tech and expensive weaponry is often outside the reach of most State and non-State adversaries and often become a liability because such systems are too expensive to risk their loss in combat.

With the international military arms sales moving to a COTS/MOTS environment many systems may be bought off the shelf and modified in one's own country to meet special requirement or to use technologies that provide a unique advantage. If systems are purchased with open, common and modular architectures using common interface and data exchange standards then additional system options could be added as necessary. Since the COTS/MOTS upgrades follow the IT rate these systems could be maintained through life by managing and upgrading the architecture and replacing systems when it is cheaper to buy a news instead of upgrading them. We perform this type of system through life management every day when we upgrade our homes, personal electronics and cars.

Once Land Force capability management is shifted from system management to architecture and technology management acquisition decisions could then focus on: 1) defining which capabilities the Land Force needs to meet current and future deployment, 2) determining how the existing Land Force architecture could be changed to address new capabilities in a "whole FIC" manner (i.e. using organisations, people, networks and systems), 3) determining how the Australian Army's 1st Division and Forces Command could perform operational experiments and conduct training to address the new capabilities and 4) procuring or upgrading the appropriate networks or systems that enable the new capability. Long term planning could be performed to ensure that the new capability could be sustained over a long or limited time duration, whichever is appropriate. This process provides options for the Adaptive Army and allows it to adapt systems and capability to meet near term operational objectives.

The deployment cycle paradigm that the Adaptive Army Initiative provides allows for effective planning for current and future deployments. This process would be more powerful if system and network acquisition were also aligned to it.

A Land Force is made up of Organisation, People, Networks and Systems. These are the main Fundamentals to Capability (FIC). All four of these elements need to come together in time during a deployment in order to achieve an effective operational capability. Thus, systems and networks must also be prepared for deployment so that

they are developed, tested and trained with by the Land Force before deployment.

These activities should be synchronised in order to ensure that tactics, procedures, organisation, people, systems and network are used that are representative of what might be experienced during deployment. Such a process ensures that not only operational, but logistics, sustainability, and training issues are addressed early before deployment where discrepancies can be addressed without loss of life from enemy action. In addition, other Joint, Air and Sea programmes associated with the deployed Land Force capability could also be planned, funded, synchronised, tested, trained with and delivered.

As an Independent Systems House in the UK to the MoD FRES IPT / Programme, our experience in this role has highlighted the importance of approaching requirements capture, capability review, robust commercial management of technology demonstration, to develop a rigorous, realistic set of requirements which Industry can honestly respond too, yet address the complexities of the Land Force capability problem.

At a time of programme cancellations and withdrawal of preferred supplier agreements, due to unclear requirements, the systems house approach, whether in using a systems house, or taking the rigorous and robust commercial approach the Independent systems house has taken, offers Defence an opportunity to enter into large defence procurement contracts with greater chance of programmatic success and manageable uncertainty.

In summary, we feel that the acquisition process needs to be adaptive to need the Adaptive Army's operational needs. Use of a system house organisation can help to transform the acquisition process from "big bang" to that which will meet the needs of the Adaptive Army. More focus will need to be placed on managing architecture by DoD rather than just systems. Atkins sees a promising future for the Adaptive Army and wants to be part of that future.

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