

Submission From:

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FADT References Committee inquiry on the capability of Defence's physical science and engineering (PSE) workforce, with particular reference to:

a. the importance of the PSE workforce to Defence projects;

The importance of having a highly skilled PSE workforce within Defence is to retain the in house specialised skills, experience and knowledge, to maintain all current and future platforms at high level of operational readiness. The skills that are currently retained within the Defence Department have taken many years to acquire, and can not always be obtained simply by reading a document. I believe you will find that the present PSE workforce has worked away providing these services everyday without being fully recognised for their efforts.

A current initiative being run within Maritime ADF/APS is Reliability, Availability and Maintainability (RAM), which has been in the other services for some time. I was trained in version of RAM, whilst employed in the Petrochemical Industry during the 1990's, which provided the organisation with greatly improved output and reliability. A critical role a skilled Defence PSE workforce with RAM training, can deliver is enhancement of through life support for existing and future platforms, in a very cost affective manner. The loss of this important capability may in the short term appear to be a cost saving however, the long term aspect is that once a capability like the PSE is lost, the ability to retrain and rebuild the skills and knowledge can take many years. Industry is also presently facing a severe shortage of a skilled PSE workforce, which was a flow on from financial decisions made some 20 years ago, when there was an abundance of skilled personnel, with large industries to accommodate the training of these skills. Unfortunately the focus was on profit margins and down sizing as opposed to investing in a sustainable future of a skilled workforce, so most organisations left the training up to somebody else, hence the situation industry and Defence find themselves in now. The same thing also happened in the 1970's, which would indicate nothing learnt time and time again.

Defence is currently in a unique position due to the size and diversity of it's platforms, as there are still a reasonable number of highly skilled personnel with the PSE workforce. With the constant project rollout of new equipment the PSE workforce have been able to maintain currency with technology, and have the adaptability to transfer these specialised skills within the Defence PSE workforce. The recent announcements by the Government of the day, regarding the decision, have warships manufactured or part there of, within Australia, and the building of new Army vehicles, provides Industry and Defence the opportunity to enhance their current workforces. This decision will also enable Defence PSE and Industry to maintain leading edge skills within the country for future generations.

Over the last 15 years of working in Defence, I have noticed that the capture of Defence contractual Intellectual Property (I.P), during the project phase of Defence systems/platforms when jointly engaged with external organisations, has been poorly managed. Hopefully during the process of the latest manufacturing of Defence equipment, the PSE workforce will have a greater involvement with Industry during the development/build stage, and share the I.P. obtained equally with industry Another advantage with having Defence/Industry

involvement is the development of specific skills which should develop a pool of skilled PSE personnel, within Industry, that will allow Defence to draw from for future engagements.

Hopefully this will enhance the perception that Government and the General Public have of APS/PSE workforce, who in most cases are not fully aware of the behind the scenes value added by the Defence PSE workforce in each campaign committed to by the Australia Government.

b. the current PSE capability within Defence, OMO and DSTO;

The current PSE capability within Defence is very under valued, and is unfortunately somewhat considered to be a disposable workforce within the Maritime environment. This has evolved over a number of years, due to the culture embedded within Defence. Most positions that were dedicated PSE, have been eroded over time because of the inability of management to attract qualified personnel. The protocol that appeared to have been adopted at that time, was to re-write the duty statements into a more generalised nature so that where PSE positions could not be filled, non PSE personnel could apply and successfully fill these positions to maintain Full Time Equivalent (FTE) numbers within the departments. When I joined Defence in 2000, as a Technical Officer level 3, the minimum requirement was an Associate Diploma in Engineering, which I had combined with many other qualifications, unfortunately now the present qualification requirement is "TBA". The impact of these past decisions placed Defence in the present reduced ability of effectively understanding the level of maintenance/repair required to have their equipment managed effectively, with the reliance heavily on the OEM/ Contractors advice.

What has evolved from this, is the DMOSS Panel, where middle management can obtain contract personnel, of which are mostly ex-defence personnel to fill vacant positions. This was contrary to the initial direction from the DMO, which was to look internally first, however it was easier for middle management to go straight to the DMOSS Panel. From my understanding the hiring personnel from the DMOSS Panel, equates to approximately 3 times the hourly rate of APS6 employee. The initial intent of the DMOSS Panel was for organisations to hire staff for a limited/short term if they were unable to engage permanent staff to cover high workload situations.

About 18 months ago our department had a reorganisation, the process of obtaining DMOSS Panel staff has escalated, since then to a level of close to two to one APS employees, where there appears the intent is not to utilise existing skills known to management within the organisation. The abuse of the DMOSS panel was also mentioned at a Business Performance Review (BPR) earlier in the year by the then acting CEO of DMO, prior to the change to CAS Group.

At the time of the reorganisation, I presented my qualifications to management conducting the reorganisation (who were non PSE staff), unfortunately they were unable to ascertain my level of skill from my resume and Certificates. Since the release of the First Principles Review the process of engaging DMOSS Panel and lower level ADF personnel are still being conducted, from my perception of this process, the only advantage appears to be middle management reducing their accountability and responsibility by not having managing APS staff.

The First Principles Review made a recommendation to the Government stated the trend of outsourcing APS staff was not the answer for cost reduction however, in my department, the influx of DMOSS panel personnel has increased the staff numbers two fold, which would

indicate that the workload required to achieve the outcomes, has not decreased but has increased. With this taken into consideration, the Government's perception of too many APS personnel is what I consider, not consistent with the actual work required and currently being undertaken. If the hidden costs of the DMOSS panel personnel were included as part of the total staff numbers against each project, the justification to reduce APS personnel would be inconsistent with cost effectiveness.

These costs would be better invested into a full time Defence employee's, where the knowledge and skills could be retained and used as a Defence Asset, for present and future Defence capabilities, thus ensuring long term cost effectiveness. The current trend in outsourcing also reduces Defence's ownership of any skills and knowledge gained (the Intellectual Property), which is currently retained by non defence organisations (outsourced). The long term effects of this process would increase future budgets for Defence and limit the ability of Defence to control future costs, where I have no doubt there would be an impact on Defence's ability to provide state of the art platforms and equipment to meet the Government of the day's commitment due to cost blow out.

The release of the First Principles Review was welcomed by the PSE workforce within the CAS Group (ex DMO), as there were known deficiencies identified in the review, and a process to enhance the current Defence future for the PSE. Unfortunately this appears to short lived within our department, as an email was sent on the 18 September 2015, from management, advising of a reorganisation. The email contained the paragraph below, advising staff that a consultant company, which had been previously used by the department, had been engaged to undertake the review.

*"I want to now turn our focus on how we improve the **** into the future. I think there is a great opportunity for us to get ahead of the game. I am also concerned if we wait too long and we do not have a future operating model, the First Principles Reform could come along and tell us how our SPO should be designed. This top down approach might not deliver the best fit for our Enterprise construct."*

I responded via email, enquiring if the intent was to utilise the engineering personnel within the organisation, as mentioned in the First Principles Review and a higher ranking person in the organisation, where unfortunately I did not receive a reply. The following week when the opportunity arose I asked the question if the intent of the consultant process was to look at what qualifications personnel within the department currently held. Further to this I asked if the department would utilise and enhance the current qualifications of staff. The response I received was that the review would provide role clarity in the organisation, and the opportunity to update skills, including resilience.

On attending a workshop with the consultant organisation, I found the pitch of the workshop appeared to be catering more around obtaining information on the current tasks undertaken by staff, with no requirement or interest in individual's qualifications. The leader of the workshop informed the group, that the questionnaire had been developed by the lead consultant and our management. I enquired about the grouping with my Quality Assurance (Engineering) position, and was informed that personnel had been grouped into departments consistent with their supervisor work group, my supervisor being non PSE, so I apparently became non PSE, by default. This comment allayed any perception I had, that the intent of the reorganisation was to conform to the First Principles Review in creating a 1 Defence and rebuilding Engineering. The only other conclusion I could arrive at from my previous experience, was as the paragraph stated, certain components of the First Principles Review may not fit the construct management had in mind, including what I presume is the future of

Defence the PSE workforce. With management being fully aware of my qualifications, skills and knowledge, including over 25 years of sound experience in the ship building and repair industry, at various management levels. I personally feel that I am being victimised and discriminated against because of my age, qualifications and experience however do not believe that I would be an isolated case, due to the deeply imbedded culture.

c. the potential risks of a skills shortage in the PSE workforce and a decline in Defence's PSE capability;

There is a genuine explicit potential of a skills shortage in the PSE workforce, which will have a significant impact on the future of the Defence capability. As I have previously stated, the current trend is to obtain engineering staff from the DMOSS panel, at a very high cost. This currently has a impact on Defences ability to engage and retain a PSE workforce, as the incentive to earn a higher income and conduct the same work is only a matter of knowing the right contacts and be employed through the DMOSS panel.

I would highly recommend that the government engage an independent, external auditor to collate the true cost against the current process of engaging DMOSS Panel personnel, as apposed to growing a dedicated workforce. I have no doubt that the figures will astound not only the government ministers but also the general public.

It is only now that organisations like Defence are feeling the impact of these decisions made in the 1990's, by organisations not investing in a skilled workforce for the future, who are now trying to rebuild these skills, which will take some time to achieve with the reduction of manufacturing within Australia. This cycle appears to be a 20 something year evolution, as a similar event happened during the 1970's however there was a larger manufacturing sector where multi skills could be developed, do we really learn lessons? With the skill shortage, the remuneration for the high demand trades has increased, beyond what the Defence pay scales are however, Defence would normally be able to attract ex service personnel. Unfortunately in the current climate Defence now not only competes with Industry, but also from within, via the DMOSS Panel, where funding appears to be endless. With that said, the current aging Defence PSE workforce skills and knowledge could quite easily be lost, if the current corporate knowledge and skills are not passed on to the next generation of Defence PSE employees.

d. the ability of Defence to have relevant PSE capabilities to meet future technological needs;

As with any future need, the level of planning and forecasting undertaken and the building of a solid foundation will always impact on any future capabilities. I have not doubt that if the work and changes identified by the First Principles Review are not fully incorporated, Defence will miss the opportunity to reverse the current trend and severely affect the in house capability to meet future technological requirements. The current Defence PSE workforce has maintained the existing technology and in some cases has developed the technology of the future to meet current and future Defence capabilities. I do not believe that the current PSE workforce, receive the acknowledgement and recognition they deserve for leading the advancements within Defence, as it is lost within the hype of the outcomes of completed missions.

e. the ability of new technologies discovered by the PSE workforce to be incorporated into Australia's defence capability planning;

To expand on the previous question in most cases the Defence PSE workforce would have a vast amount of experience of old and new technology and a better understand the effects and limitations on equipment within the Defence environment. Australia is and has been internationally recognised for their high level of qualifications, skill sets, advanced thinking, and can do attitude. This has evolved from current and previous campaigns with the ADF, where the PSE has developed and successfully implemented new or modified capability to meet the requirements of engaged Australian forces. I am aware of feedback from active Australian forces, where our allies have been impressed with some of the new capabilities Australian forces have been equipped with to enhance their campaign, to the extent the Allied forces have approached Australian Manufacturers for the supply of this equipment, so the answer is it is already happening.

f. the effect of project outsourcing on Defence's PSE capability;

With the current platforms having a scheduled end of life in approximately 5 years, Defence has a golden opportunity to build the skills and knowledge of their current and future PSE workforce, including working together with the contract maintenance personnel in various aspects of engineering maintenance, where in some cases, there may be a requirement to conduct higher level engineering functions of the older equipment. This would require the Defence PSE to step outside the square where they can gain valuable experience, including the use of RAM principles to add value to the performance and reliability of the systems and equipment. If this opportunity is outsourced I have no doubt that the impact would be detrimentally to Defence Engineering, now and the foreseeable future.

As previous stated the effect of project outsourcing in this current climate is only a short term quick fix, where the mindset is to transfer the accountability and risk from Defence management to outsourced organisations. This option would not only destroy the Defence PSE capability, it will transfer Defence IP to a third party, where Defence has limited to no ability to regain the PSE capability or lost I.P. The best option is where there is Defence PSE and Industry working together on all projects, and if contracts are written correctly, they should include the sharing of any Intellectual Property gained during the development. This is something Defence has not been able to do well, due to the fact the Defence PSE workforce have not been engaged at the appropriate time and levels.

This process will develop skill sets and knowledge, not only in Defence PSE workforce, but also in Industry and create a healthy pool of skilled PSE personnel, that Defence can draw on to top up their existing workforce. My personally observation is the current approach is a severe mismatch and creates a false sense of progression which is impaired, by the current culture, and needs to be replaced with a futuristic long term plan making Defence one of the top preferred employers.

g. the ability to attract and retain a highly skilled PSE workforce in Defence, DMO and DSTO; and other related matters.

This has been an ongoing matter within Defence, as in most cases ex defence personnel find it to there advantage to be employed through external agencies, where they are paid a higher wage and valued. There are many very highly skilled ex defence personnel, depending on the

areas they were employed will depend what experience/Skills they have gained. The current practise of outsourcing appears to suggest Defence is more than happy to spend large sums of public funds to external organisation for non Defence PSE personnel however, there appear to be a reluctance to invest sufficient funds into the Defence PSE workforce and build a sustainable internal capability.

Again I would call on the Senate committee, to look at the real financial costs associated with outsourcing, and pursue the implementation of the First Principles Review to ensure a sustainable PSE workforce for Australia's Defence future.

Regards