

## REPORT ON THE DEFENCE INNOVATION FORUM 2014

### Background:

1. The wider Australian Defence Organisation needs to improve its ability to keep pace with the innovations occurring in industry and academia. To aid Defence in this endeavour, the Defence Innovation Forum has been established as a pan-Defence capability for fostering and promoting a culture of innovation in Defence to provide the Australian Defence Force with a 'combat edge' into the future.
2. The inaugural Defence Innovation Forum (DIF) was held as part of the Defence + Industry Conference on the 30 of July at the Adelaide Convention Centre. The forum was organised by the Defence Science & Technology Organisation on behalf of the Department of Defence.
3. The DIF brought together over 250 representatives from Defence, academia, government research organisations, and industry to start the conversation and create the momentum for an ongoing dialogue between Defence, Industry and Academia about how to enhance delivery of innovative capabilities for the Australian Defence Force.
4. The forum was conducted in three inter-linked parts:
  - a. The strategic context was set by keynote addresses from VADM Peter Jones (Chief Capability Development Group) and Prof Goran Roos (South Australian Department for Manufacturing, Innovation, Trade, Resources and Energy), and the opening address was given by Dr Alex Zelinsky (Chief Defence Scientist).
  - b. A panel session with influential thinkers from academia, industry and defence, including VADM Peter Jones (Chief Capability Development Group), Dr Sarah Pearson, (Interim CEO CBR Innovation Network); Chris Jenkins (CEO, Thales Australia); Prof Rob Evans (Defence Science Institute); MAJGEN John Caligari (Head Capability Systems;), Dr Alex Zelinsky (Chief Defence Scientist), and Dr Alexei Markarenko (Director Marathon Targets).
  - c. A series of syndicate sessions led by DSTO and Industry to help identify barriers to and develop solutions for enhancing innovation within Defence, producing a number of practical ideas to address the question of 'where to from here?'
5. Outcomes from the forum include proposals for developing the defence innovation enterprise to ensure it effectively supports our industry and research partners in turning ideas into enhanced capabilities for Defence.

### Summary Challenges:

6. **Criticality of Innovation to Defence Capability:** Greater use of innovation and collaboration between programs such as the Capability and Technology Demonstrator (DSTO), Unsolicited Innovative Proposals (UIP) Scheme (DSTO), Rapid Prototyping, Development and Evaluation (CDG), Defence Materials Technology Centre (DMO), Diggerworks (DMO), Defence Innovation Realisation Fund, PIC Development Fund (PICDF) and the Senior Innovation Steering Committee.
7. **Coordination and Integration across Defence Programs:** This includes the alignment of disparate program stakeholders with specific interests, following ideas from concept to capability, being flexible with defence capability funding, and linking end-users to the innovation-base.
8. **Risk Aversion and Mitigation:** Developing mitigation strategies to address the problem of risk aversion in the innovation space. This includes establishing organisational structure and processes to enable appropriate levels of technological risk in defence procurement projects.
9. **Inclusion of the Academic Community:** Currently, innovation from the academic community is available for integration into Defence requirements but the mechanisms for drawing on this are

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ad hoc. The community is a resource ready for mobilisation by Defence through a more inclusive coordinated approach.

10. **Intellectual Property:** IP, conflicts of interest, above/below the line are significant impediments and often destroy in-progress solutions. Need to share IP and dollars.
11. **Communication:** In an innovation context it is imperative that information flows from people with visibility of the problem space through to people with visibility of solution possibilities. Typically these people are distributed across the Defence, industry and academia. Traditional stove-piped business practices, both internal and external to Defence, mean that formal information flows are designed with only a limited view of who can understand a problem. Personal networks are commonly used as a substitute for objective situational awareness. This results in fewer and weaker internal and external relationships, poor utilisation of resources within the Defence, an inability to recognise and harness opportunities and an inability for external organisations to prioritise investment of resources.

### **Recommendations:**

12. To assist Defence in moving forward in developing more effective and innovative relationships across industry and academia the follow potential actions were proposed:
  - a. Develop an innovation strategy as part of the White Paper development.
  - b. Establish an innovation task force across Defence to lay the foundations of collaboration between Defence agencies with Industry and Academia.
  - c. Continually work to identify and remove/mitigate barriers to innovation across the Department to enhance collaboration and increase the pace of innovation.
  - d. Establish a series of cross-pollination activities (forums and symposiums) to enhance generation of innovative ideas and technologies.
  - e. Establish a sustainable innovation market place that provides reliable business opportunities and long-term industry and academic investment.
  - f. Develop a Defence Innovation Maturity Model that incorporates all of Defence, industry, academia, and the international community.
  - g. Modernise processes to include initiatives such as R&D tax incentives, etc.
  - h. Work with Defence to establish a Master Challenge/Opportunities Inventory to focus direction and involvement for Defence, Industry and Academia collaboration.
  - i. Establish a core group of Industry, Defence and Academia participants to carry on the innovation conversation.
  - j. Develop a proposal for an Integrated Defence Innovation System that will provide a clearer path for the transition of ideas to capability.