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## RAAF'S PLAN JERICHO: BREAKING DOWN WALLS

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## RAAF'S PLAN JERICHO: BREAKING DOWN WALLS

### AIM

1. The Royal Australian Air Force (RAAF) is undergoing a period of rapid transformation into “a modern, fully integrated combat force that can deliver air and space power effects in the information age.”<sup>1</sup> The framework to deliver this transformation is termed Plan Jericho. The aim of this paper is to outline Plan Jericho and highlight the virtues which present potential opportunities for the Canadian Armed Forces (CAF) and Royal Canadian Air Force (RCAF) to leverage off the work being undertaken by the RAAF in order to augment its collective knowledge and capacity.

### INTRODUCTION

2. Plan Jericho's genesis is a result of RAAF senior leadership's realisation that – in order to fully exploit new capabilities such as F-35A, P-8A and EA-18G – the Air Force needed to transform into an integrated, networked force across the air, space and cyber domains.<sup>2</sup> To harness the full potential of modern equipment, senior leadership also appreciated that maximising the potential of its people, and a new attitude towards operating with Navy, Army and international partners as well as industry was key.<sup>3</sup> Essentially, fifth generation equipment required a new ‘fifth generation’ approach across most of the Air Force's endeavours; hence the analogy to breaking down walls and creating freedom of thinking implied in the name Plan

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<sup>1</sup> Royal Australian Air Force, *Air Force at Avalon 2017: Plan Jericho* (Canberra, 2017).

<sup>2</sup> Royal Australian Air Force, *Air Force Plan Jericho Connected Integrated* (Canberra, 2015), 1.

<sup>3</sup> Ibid.

Jericho.<sup>4</sup> The Plan places heavy emphasis on warfighting; its aim is to transform Air Force into a “fifth-generation enabled force that is capable of fighting and winning in 2025. . . .”<sup>5</sup> While the RAAF has always operated cutting edge technology, a ‘fourth generation’ mindset in a rapidly evolving strategic environment will quickly see the technological edge disappear.<sup>6</sup>

3. While Canada is not currently acquiring a fifth generation fighter aircraft, it is entering a period of significant investment in its armed forces.<sup>7</sup> Like Australia, the Canadian Armed Forces (CAF) must ensure the full potential of the tax payer’s investment is realised – analysis of Plan Jericho presents an opportunity to achieve this. Noting there are significant structural differences between the Australian Defence Force (ADF)/RAAF and CAF/RCAF such as ‘stove piping’ of the three Australian services, some adaptation to Canadian circumstances will be required. As the reader will note, Jericho methodology can maximise potential across the spectrum of Defence business including equipment, people and processes. While the holistic benefits of Plan Jericho will be highlighted, this paper distils the aspects which are likely beneficial to the CAF in isolation, enabling well placed leaders to adopt part-solutions where appropriate. This is largely achieved by outlining the Jericho principles and themes but examples of some of the early achievements will be included to demonstrate not only the aspirations of the Plan but also its early execution.

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<sup>4</sup> In the Black, “Breaking down walls with new strategic thinking,” last accessed 29 January 2018, <https://www.intheblack.com/articles/2017/08/01/break-down-walls-new-thinking>.

<sup>5</sup> Royal Australian Air Force, *Air Force Plan Jericho Connected Integrated* (Canberra, 2015), 3.

<sup>6</sup> Ibid.

<sup>7</sup> Department of National Defence. *Strong Secure Engaged: Canada’s Defence Policy* (Minister of National Defence, 2017), 33.

## DISCUSSION

4. The requirement to transform is not just a result of the RAAF acquiring new jets. The threat environment where potential adversaries, both state and non-state actors, have ever increasing access to information and technology also necessitates change. Similarly, modern forces have access to ever increasing amounts of data which needs to be fully exploited and the government of today requires “rapid and agile military options.”<sup>8</sup> Under Plan Jericho’s vision which is “to develop a future force that is agile and adaptive, fully immersed in the information age, and truly joint” are three themes.<sup>9</sup> Theme one is “harness the combat potential of an integrated force” theme two is “develop an innovative and empowered workforce” and theme three is “change the way [RAAF] acquire[s] and sustain[s] capability” where ultimately theme two and three are viewed as essential to achieving theme one which speaks to the central warfighting tenet of Jericho.<sup>10</sup>

### Principles

5. Prior to expanding on the three themes it is worthwhile highlighting the guiding principles that shape Plan Jericho. As previously mentioned, Jericho is combat mission focussed, therefore any initiatives under the Plan must have a “. . . tangible and enduring impact on the roles and the missions of the Air Force.”<sup>11</sup> A further guiding principle recognises that Canberra doesn’t have all the answers and looks to empower innovation as the answers to many of Air Force’s challenges lie within the workforce. This principle is best articulated as “top-down

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<sup>8</sup> *Jericho Briefing Slides* accessed at <http://drnet.defence.gov.au/raaf/Jericho/Pages/About.aspx>

<sup>9</sup> *Air Force Plan Jericho Connected Integrated*, 4

<sup>10</sup> *Ibid.*, 4-9.

<sup>11</sup> Royal Australian Air Force, *Plan Jericho: Program of Work 2016* (Canberra, 2016), 6.

design meets bottom-up innovation.”<sup>12</sup> The final principle captures the requirement for flexibility in planning which is captured as “strategy-led: a compass not a map.”<sup>13</sup> This principle advocates making informed decisions about the future and appropriate acquisitions and support arrangements which compliment that future but to be prepared to alter course through innovation as the future becomes clearer.<sup>14</sup>

## Themes

6. As the title of theme one suggests, integration and networking is the central element. The forces of the future rely on the synergies of ‘linked’ capabilities to be fully effective. Jericho portends that these capabilities will “. . . transcend traditional organisational structures” and therefore the Force’s concept of operations and training must develop in order to support this.<sup>15</sup> The RAAF has updated its concept of operations in line with Jericho principles and to capture the ‘vectors’ set by the Defence White Paper 2016.<sup>16</sup> Although the specifics of the concept of operations are beyond the classification of this document, it can be said that it will be used to “. . . drive capability needs, and guide innovation in tactics in operations.”<sup>17</sup> Capability gaps identified in the concept of operations are used to inform the Plan Jericho Program of Works. Initially there was over 100 identified gaps which were grouped into 16 discrete projects of varying timelines. Implementation directives from Deputy Chief of Air Force and Air

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<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> *Air Force Plan Jericho Connected Integrated*, 4.

<sup>16</sup> *Plan Jericho: Program of Work 2016*, 5.

<sup>17</sup> About Plan Jericho, last accessed 29 January 2018.

<http://drnet.defence.gov.au/raaf/Jericho/Pages/About.aspx>

Commander Australia (two star rank) to project owners, usually at one star rank, ensures accountability is a feature of the remediation works.<sup>18</sup>

7. Theme two, developing an innovative and empowered workforce, is critical to achieving theme one, especially in maintaining an advantage over potential adversaries in the longer term.

Plan Jericho aims to foster a culture which supports the theme of innovation and empowerment at the lowest levels. One of the early successes of Plan Jericho has been how it simply articulates the ‘problem’ and the ‘fix’ assisting in achieving “. . . buy-in from the bottom-up . . .”.<sup>19</sup>

Modernising training is a key focus where heavy emphasis is placed on the role of technology in simulation to create immersive virtual experiences across a multiple platforms and services.<sup>20</sup>

Initially, professional military education and training was not identified as a key driver of innovation and empowerment; however, its importance is now recognised as the 16<sup>th</sup> discrete project. This project aims to “. . . develop people with innovative and inquiring minds . . .” who are able to work with industry and in the joint environment in modern ways.<sup>21</sup> It places specific emphasis on technical and combat mastery in keeping with the central warfighting tenet.

8. The last theme of changing the way the RAAF acquires and sustains capability is largely focused on the role of industry in achieving Jericho aims but is also focused on processes within Defence, which is important as acquisitions are managed outside of the three services. The clear aim of this change is to give “the organisation the capacity to respond quickly to change and

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<sup>18</sup> *Plan Jericho: Program of Work 2016*, 2.

<sup>19</sup> “Podcast: Plan Jericho open for business” Defence Connect, 31 Jan 2018, <https://www.defenceconnect.com.au/strike-air-combat/120-plan-jericho-open-for-business>.

<sup>20</sup> *Air Force Plan Jericho Connected Integrated*, 4.

<sup>21</sup> *Plan Jericho: Program of Work 2016*, 28.

bring new technologies into service before they become outdated or outclassed.”<sup>22</sup> Air Force is working closely with Defence’s Capability Life Cycle and Smart Buyer implementation teams – Jericho is fully aligned with these teams and views itself as early adopters of the enduring reforms they are implementing.<sup>23</sup>

9. As a result of theme three, the Plan Jericho team have developed a concept termed ‘Acquisition Sprint’. The concept – developed in collaboration with the University of Technology Sydney – is a new approach where “Defence will invite co-design teams to understand Defence's capability or acquisition problem, and through an innovation methodology produce a proposal for Defence.”<sup>24</sup> Through a process of optimisation, the proposals are refined and Defence selects the preferred solution. Rather than Defence fully fund the solution through a contract, Defence enters into a joint prototype with industry reducing acquisition costs.

10. The pilot project to test Acquisition Sprint and its design thinking was the retrofit of automatic dependent surveillance broadcast (ADS-B) system to the Hawk 127 lead-in fighter jet.<sup>25</sup> The team started with what they termed a ‘design scrum’ of a pilot, an engineer, an air-traffic controller, and a range of suppliers from industry.<sup>26</sup> Collectively, they were able to break down barriers, created common understanding and were able to quickly write the specifications in a concise 10 pages. This has reduced the acquisition time from a projected six years to three and by not funding the solution but buying prototyping, Defence predicts it will save 30 to 50 per

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<sup>22</sup> Enhancing Air Power and Integration, last accessed 29 January 2018.  
<http://drnet.defence.gov.au/raaf/Jericho/Pages/Capabilities.aspx>

<sup>23</sup> Acquisition Sprint, last accessed 29 January 2018.  
<http://drnet.defence.gov.au/raaf/Jericho/Pages/Acquisition-Sprint.aspx>

<sup>24</sup> Ibid.

<sup>25</sup> In the Black.

<sup>26</sup> Ibid.



cent.<sup>27</sup> In this instance, efficiencies of both time and money have been realised by getting the stakeholders together very early in the process, and while it was successful here, it is not seen as a magic bullet for all acquisitions. Rather, it represents another method of acquisition, but more importantly it serves to highlight what can be achieved with the creative thinking – a successful departure from ‘the way it has always been done mold’ which is core to Jericho.<sup>28</sup>

### **Jericho Dawn**

11. Linked to the three themes and the 16 projects of work is Jericho Dawn. Its objective is “. . . to demonstrate new capability and introduce it quickly to enhance joint warfighting effects on an enduring basis.”<sup>29</sup> Jericho Dawn looks to maximise the “quick wins and enduring improvements” and it also champions a higher tolerance of programmatic risk and the normalisation of failure when innovating.<sup>30</sup> Jericho Dawn seeks to demonstrate “the art-of-the-possible” and assists with opening the eyes of the workforce and key decision-makers which in turn, helps breakdown the traditional ‘the way we have always done it’ thinking.<sup>31</sup>

12. One such example was the partnership between Jericho, Defence Science and Technology Group, SAAB Australia and Microsoft to build a battlefield commander visualisation augmented reality headset. The system was demonstrated to senior government and military leadership, including the Prime Minister, Defence Minister and service chiefs in the cargo area of a C-17 aircraft at the Australian International Airshow. Whether or not the headset enters Defence service is not the point, rather it is exposure to augmented and virtual reality

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<sup>27</sup> Ibid.

<sup>28</sup> Wing Commander Jesse Laroche (Plan Jericho team, email, 31 Jan 2018).

<sup>29</sup> *Plan Jericho: Program of Work 2016*, 8.

<sup>30</sup> Ibid.

<sup>31</sup> Jesse Laroche (email, 31 Jan 2018).

which could assist in visualising future complex military problems and familiarity and comfort with the technology that is important.<sup>32</sup>

13. One notable example of a quick win but also a somewhat welcome failure under Jericho Dawn was the integration of situational awareness and communication tools to RAAF AP-3C Orion aircraft. Initially, the use of interim Link 16 technology was pursued. However, this was not successful but through the tenacity of the project staff and the lessons they learnt, the project was able to deliver an alternative tool using existing communications channels which enhances the crew's ability to receive situation awareness information.<sup>33</sup>

14. Another quick win which captures the essence of Jericho is the Wi-Fi capability installed onboard C-17 aircraft. The system links Defence issued electronic devices to broadband satellite communications which have been tested with feeds from Unmanned Aerial Systems and other tactical information plus skype-like video conferencing. Originally procured to support Special Forces, the capability clearly allows passengers of any service to stay informed about the situation, be it a warzone or a disaster area, right up until arrival whereas previously they would have relied on limited voice communication. This technology will be installed fleet wide initially on C-17s and subsequently other air mobility aircraft.<sup>34</sup>

15. The two examples above are tangible outcomes of Plan Jericho which not only add to capability but also serve to maintain or increase the early momentum in 'buy-in' from the RAAF

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<sup>32</sup> Jesse Laroche (email, 31 Jan 2018).

<sup>33</sup> Enhancing Air Power and Integration

<sup>34</sup> Enhancing Air Power and Integration; RAAF C-17A Fleet Gets Wi-Fi, last accessed 31 Jan 2018.  
<https://www.aeroaustraliomag.com/c-17a-fleet-gets-wi-fi/>

workforce and industry in the vision – something the Jericho team is acutely aware of and appreciates this as a key to longer term success.<sup>35</sup> Similarly, the early success has been recognised by the Royal Australian Navy and Australian Army as transferable methodology, resulting in similar projects within the respective environments.

## **CONCLUSION**

16. While Plan Jericho's genesis was a result of the acquisition of a fifth generation fighter it is clear that it has grown to be so much more – a brand in itself that shapes methodology and thinking across the Force and includes industry and other services. To achieve the central principal of maximising warfighting capability in the information age, the Plan requires flexible and agile thinking and bottom-up innovation to be successful. Beneath the guiding principles are three themes which articulate the 'how' in executing Jericho. The 16 discrete projects provide further granularity and are where 'the rubber meets the road' in mitigating identified gaps with respect to Jericho's principles. While the true measure of Plan Jericho's success are some years off, the quick wins serve to boost confidence in the Plan's long-term goals. Like the Australian Navy and Army, the CAF will likely benefit from adopting a Jericho-like transformation.

## **RECOMMENDATION**

17. While some of the key tenets and terms of Plan Jericho, such as agility, innovation, integration and interoperability are not new concepts to the CAF, there is clearly benefits of the RAAF's approach to transformation which, when adapted for the Canadian context, will highly likely be of utility to the CAF in achieving its obligation to maximise the Government's

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<sup>35</sup> "Podcast: Plan Jericho open for business"

investment.<sup>36</sup> Given the scope of Plan Jericho is large and evolving, this paper recommends the CAF undertake a detailed study of the Plan, including a visit to the Jericho team in Canberra, to best determine its usefulness to the CAF.

**Annex:** List of the 16 Programs of Works projects.

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<sup>36</sup> Department of National Defence. *Royal Canadian Air Force Future Concepts Directive Part 2: Future Air Operating Concept* (Ottawa: DND Canada, 2016), 1; Department of National Defence. *The CAF C4ISR Strategic Vision, Goals and Objectives* (Ottawa: DND Canada, 2016), iii-vi.

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## ANNEX

The *Program of Work* projects are:

1. Enhance the Air-Land Integration Capability
2. Enhance Air Force's Maritime Operations Capability
3. Establish an Air Warfare Centre
4. Enhance Air Force's C4 Capability
5. Optimise Air Force Contribution and Access to the Common Operating Picture
6. Grow the Air Force Cyber Capability
7. Develop an Integrated Fire Control Capability
8. Enhance Air Force's Air Base War Fighting Capability
9. Implement an Air Force Collective Training Plan
10. Enhance Air Force's Live, Virtual and Constructive and Ranges Capability
11. Integrate Logistics into the Battlespace
12. Develop Capacity to Manage Air Force Security
13. Develop Air Force's Strategy Driven Operating Model
14. Establish an Air Force Integrated Capability Management Process
15. Develop a Workforce Management Strategy
16. Modernise Air Force's Education & Training System