

PATHWAY TO THE STARS



AIR AND SPACE POWER CENTRE

2021/2022



**AIR AND SPACE
POWER CENTRE**

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FOREWORD



Finally there is the need for some sort of thinking department. Often and often throughout the war when some development occurred, we wondered why we hadn't thought of it before, and nearly always came to the conclusion that there was no real reason. It was only lack of foresight.

AVM H.N. Wrigley

Throughout 100 years of proud history, the Royal Australian Air Force's tactical, technical and operational mastery has delivered meaningful service to our nation, from humanitarian crises and natural disasters to competition and conflict. As our strategic circumstances and challenges evolved and shifted, so did our Air Force's structure and focus.

The next 100 years is envisaged to be no less challenging and dynamic. Climate change and population growth will strain global resources. Strategic competition, environmental and humanitarian disasters, pandemics, financial crises, state and non-state conflict are all forecast to remain prominent features in our ever-changing world. Casting a shadow over all of these potential challenges, the spectre of war between major powers is once again emerging. This raises key questions for Air and Space Power and the Royal Australian Air Force: How do we best serve to support national interests and objectives in that

future? How do we ensure that Defence acquires and then optimally employs Air and Space Power capabilities not just to prevail in a conflict, but to prevent one from occurring in the first place?

AVM Wrigley's quoted reflection is a resonating call from the formative years of our Air Force to deliberately and purposefully tap into the talent and creativity that has always been within us. This call has never been more relevant or urgent. The Air and Space Power Centre aims to identify and harness our people's capacity to think and to challenge assumptions. In this way we seek to create the genuine contest of ideas necessary to optimise Air and Space Power for our own national context and best prepare for the challenges ahead—many of which are already upon us.

Group Captain Jason Baldock
Director, Air and Space Power Centre
April, 2021



INTRODUCTION AND BACKGROUND



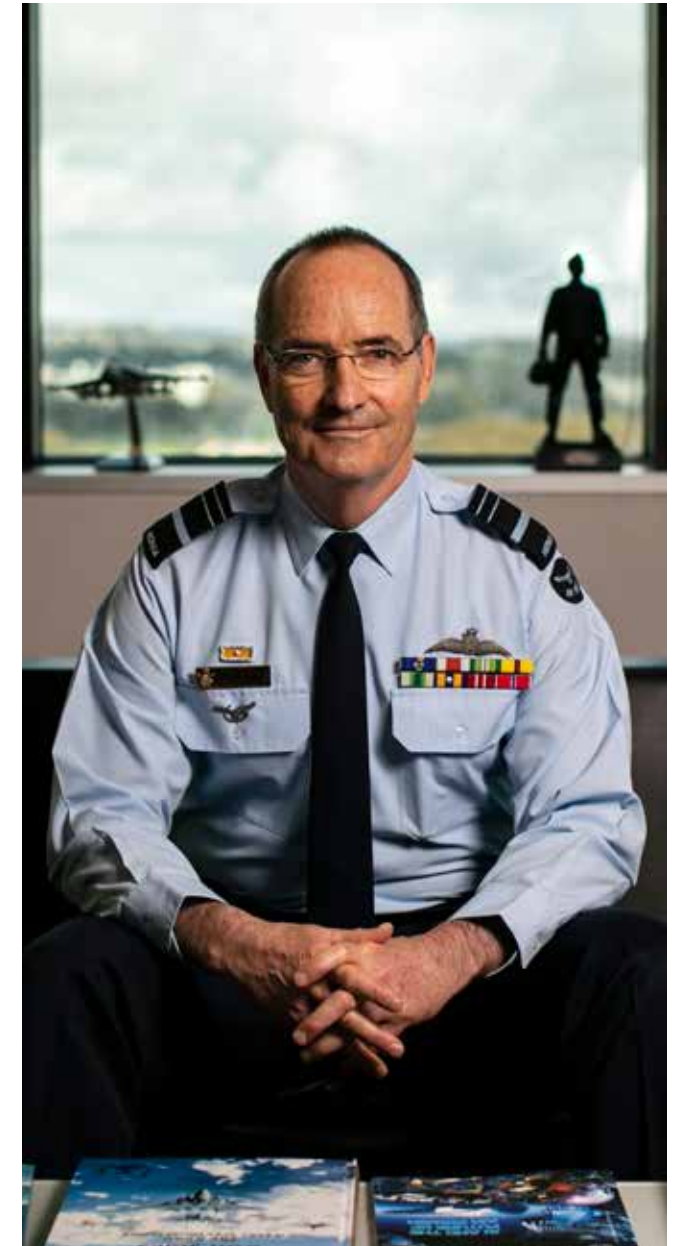
Air and Space Power's importance to Australia's security is dictated by our geography. Any serious consideration of the utility of military power across the maritime approaches that surround Australia, by ourselves or a potential adversary, requires a deep and contemporary understanding of Air and Space Power—alongside and integrated with the other domains; Land, Maritime and Information/Cyber.

The Air Power Studies Centre was established in 1989 to address this enduring need by producing Air Power doctrine. Following the *Air Power Manual's* first edition in 1990, the Centre's form and function morphed to the Aerospace Centre in 2000 and the Air Power Development Centre from 2004, and along the way established postgraduate fellowships, built an Air Force History section, which was later to be broken-off into a standalone organisation, ran multiple Air Power conferences and seminars, and embedded serving members as academic staff at the Australian Defence Force Academy. Alongside the *Air Power Manual's* fifth edition in 2006, it produced the *Future Air and Space Operational Concept*, which envisioned the Air Force we now call the 'Objective Force'.

CDF requires more from Air Force. CAF became the domain lead for both Air and Space Power in 2019 and is responsible for providing advice on how to optimally develop, project, employ and sustain capabilities in both these domains. To

achieve this, CAF requires Air Force members to go beyond Professional Military Education (PME). We need to produce professional masters of Air and Space Power; a critical mass of people that have a deeper understanding of their strategic utility than PME alone can provide. Those who not only identify possible and novel responses to threats, but imagine opportunities then create options to exploit them. Those who do not just inform Defence and Government decision-makers regarding Air and Space Power, but craft compelling narratives of the 'why' and 'so what' that underline their critical role in the context of the joint force, national interests and national power.

As Australia's strategic context is dynamic, so are the efforts required to best support the imperatives described above. Previously structures of the Centre have all gone through cycles of rising and waning efficacy against this very challenging and dynamic mandate. In 2020, CAF recognised that the Centre required a refresh to ensure it was clearly focused on emerging and future challenges, along with recognising, investing in and harnessing the inherent intelligence and talent of our workforce. In December 2020, CAF announced the launch of the renamed Air and Space Power Centre (ASPC) to meet this need.



ASPC VISION

A centre of excellence for Air and Space Power thinking focused on Australia's strategic context.

ASPC MISSION

To develop, facilitate and disseminate thinking that informs policy and decision-making on Air and Space Power's future focus, shape, and employment in support of national objectives.

ASPC OBJECTIVES



ASPC efforts will be directed towards, and focussed on, delivering against the following four Objectives:

1. ***Inform Decision Makers***
ASPC's output informs key policy and decision making regarding Air and Space Power concepts, capabilities and employment.
2. ***Develop Intellectual Capital***
ASPC forums and products create an engaged and informed Air and Space Power community-of-interest across the Joint Force, think tanks, industry and academia, and increases Air and Space Power professional mastery within Air Force.
3. ***Provide Pathways***
ASPC provides opportunities that increase our workforce's Air and Space Power professional mastery and strategic acumen.
4. ***Establish and Nurture Networks***
ASPC engagement has established enduring organisational relationships with Joint Force elements, think-tanks, academia, industry and our partners and allies that improved development of, and debate about, Air and Space Power concepts in an Australian context.

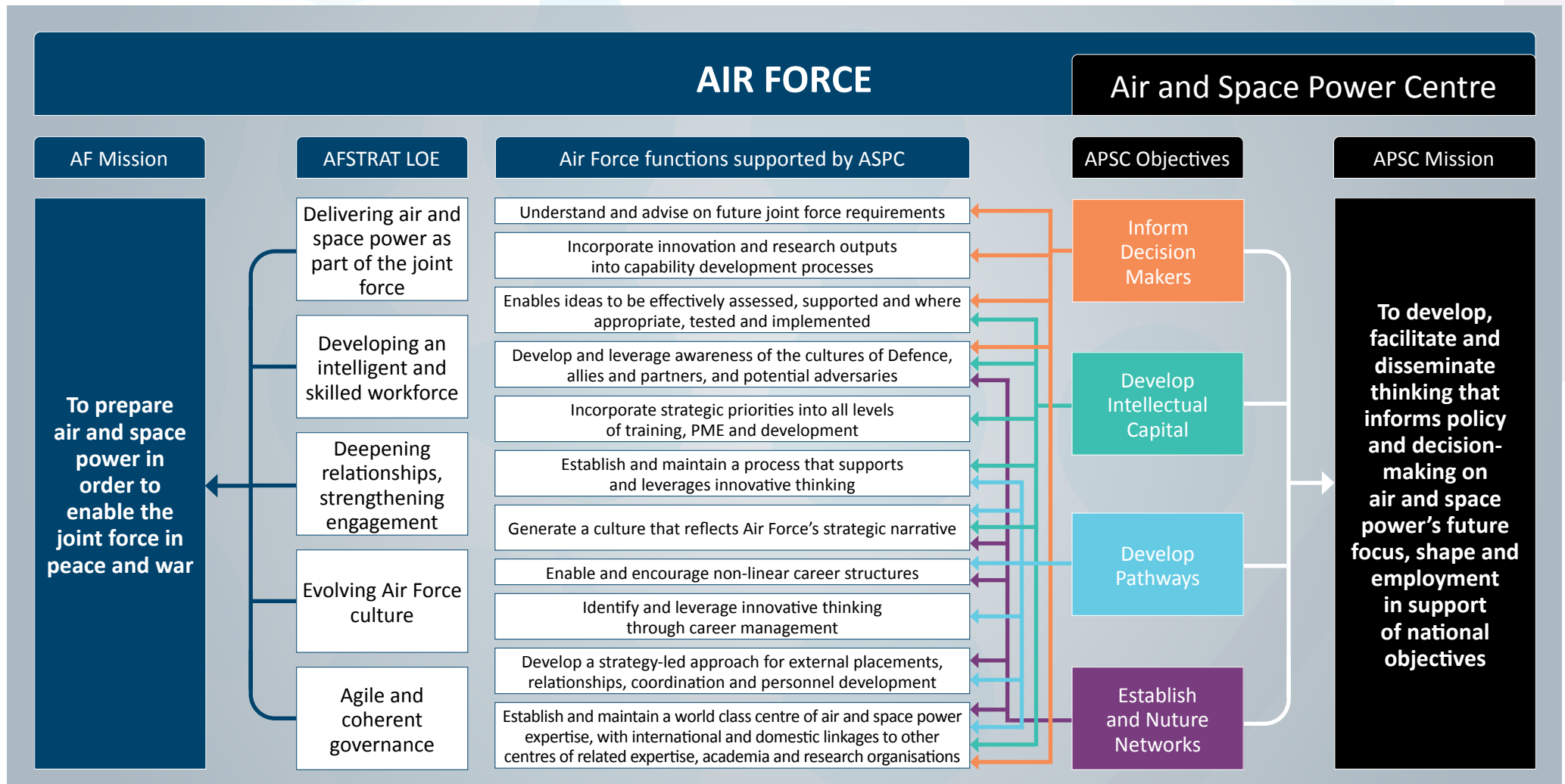


AIR FORCE STRATEGY 2020 (AFSTRAT)

Achieving ASPC's vision and mission is fundamental to AFSTRAT. Its recognition of the shift in Australia's strategic context, and the need for Air Force to

adapt accordingly, provides clear focus and a sense of urgency for the ASPC. AFSTRAT's Lines of Effort (LOE), along with the key functions that have been

derived from them in the Air Force Operating Model, are supported by ASPC's Objectives; as depicted in Figure 1.



ASPC LINES OF EFFORT



The ASPC Objectives break down into six interlinked LOE:

1. Provide the forum for the contest of Air and Space Power concepts.
2. Provide pathways for the development of future Air and Space Power strategic thinkers.
3. Provide the core of Air Force's Strategic Appreciation and Options capability.
4. Produce and contribute to contemporary, functional and integrated Air and Space Power content within joint doctrine.
5. Provide Air Force's primary Air and Space Power engagement with think-tanks, academia, other government agencies (OGA) and international partners
6. Support Joint Force Air and Space Power knowledge and mastery through and beyond the PME continuum.

COMMON THREADS

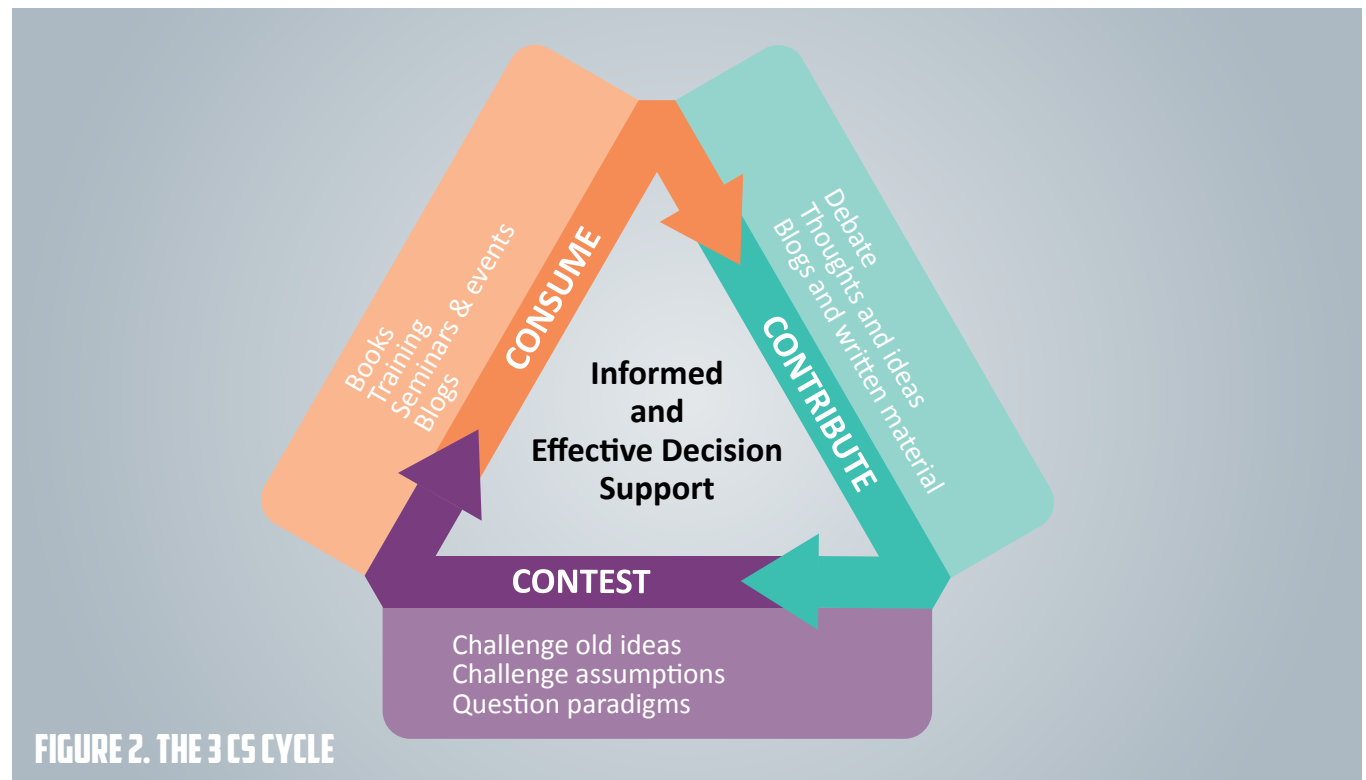
Three critical elements regarding the ASPC's relationships with its stakeholders and audiences are common to all six LOE; *Contribute*, *Consume* and *Contest*—the 3 Cs. The 3C's define an approach to the way ASPC have towards our business model and outputs, rather than objectives or deliverables in their own right. All stakeholders should get a sense that, in all things, they have opportunities

to contribute, consume and contest. By providing the means, and encouraging participating, the ASPC value proposition will be achieved.

- **Contribute:** The ASPC needs to enable its stakeholders and audience to Contribute ideas regarding Air and Space Power issues and concepts.
- **Consume:** The ASPC needs to not only make Air and Space Power products available for stakeholders and audiences to consume, but

engage widely and demonstrate the benefits of learning and contributing.

- **Contest:** The ASPC needs to provide the intellectual space and safety for its stakeholders and audiences to Contest old and new ideas, no matter how contentious, so that Air Force can derive and pursue the best options for the future.
- The 3 Cs feed each other in a constant cycle as shown in Figure 2.



LOE 1 – THE FORUM

THE NEED

Air Force lacks a forum in which its people, and the wider Defence community, can present, discuss, and contest Air and Space Power issues and concepts. As a consequence, our options are constrained by extant policy and cultural norms, and organisational perceptions that alternative perspectives and challenges to the status quo are neither encouraged nor tolerated.

LOE 1 supports ASPC Objectives 1 and 2.

THE INTENT

The ASPC will provide multiple forum to address this shortcoming, such as:

1. **ASPC Blog.** The *ASPC Blog* provides an initial entry point for personnel to submit ideas and arguments. Comments will build engagement through conversation and debate. A complementary podcast series will expand on these, bringing together those discussing key issues to explore them in further detail alongside relevant Senior Leadership Team (SLT) and Senior enlisted Leadership Team (SeLT) members.
2. ***Air and Space Power Seminar Series.*** An annual seminar series focused on building and broadening understanding around key issues (approved through the Air Force Board) will achieve greater engagement through variable formats. Panels and ‘on location’ links with Q&A throughout will move these away from a ‘brief-style’ format.
3. **ASPC publications.** The ASPC will support development of outstanding contributions into material for publication, allowing the originators to reach policy and decision-makers or achieve academic credit.

Debate within these forums is expected to generate creative approaches to the challenges Air and Space Power will face going into the future. While active participation in this contest of ideas is preferred, even passive consumption by our people will still increase their professional mastery significantly.

1. ASPC platforms will be open to submission and commentary from appropriate, registered .gov, .edu or .org accounts, opening it to think tanks, academia, other government agencies and our allies and partners.
2. Ideas and issues presented, and subsequent debate about them, do not need to comply with extant policy. However, they must be supported by evidence-based argument and presented respectfully.
3. Rank, seniority and experience are not factors – the best ideas are what matters.
4. Moderation and curation will not censor ideas, but will ensure compliance with Defence values.

LOE 2 – THE PATHWAYS

THE NEED

AFSTRAT identified the need to develop the intellectual capacity within our people. This aims to meet COSC demand for strategic thinkers – professionals able to imagine the full utility of air and space power in an environment of strategic competition and articulate that as contextualised advice to policy and decision-makers in Government.

LOE 2 supports ASPC Objectives 1, 2, 3 and 4.

THE INTENT

The ASPC will provide professional development opportunities that offer exposure to broader strategic context to enable that intent.

- These opportunities will be open to all Air Force personnel, irrespective of rank, seniority, or trade, including both uniformed and non-uniformed personnel.
- They seek to invest in these individuals' knowledge of air and space power and its use as an instrument of national power in strategic perspective, while allowing them to build networks within the national security community.

These pathways comprise a range of Fellowships, both academic and professional, such as:

- **ASPC Outplacements.** These will comprise a year working within think-tanks such as ASPI/RAND or other government agencies (OGA).
- **CAF Fellowships.** These involve a year of study to achieve a Masters by research. They focus on humanities aspects of air and space power, such as its strategies, utility in great power competition and legal and ethical issues.
- **JERICHO Fellowships.** These entail three years of full-time study to achieve a PhD in leading edge and potentially disruptive technologies that will impact air and space power's future.

- **Sir Richard Williams Scholars.** This program comprises a five-year PhD (one year full-time, four years part time) in humanities aspects of air and space power. Research will be supported by up to \$20,000 in funding from the Sir Richard Williams foundation over the course of the PhD.
- **National Security Fellowship.** Harvard's one-year program in Cambridge, Massachusetts comprises a Fellowship position at Harvard's post-graduate schools and production of a research paper on National Security for senior Defence policy and decision-makers.
- **ASPC postings.** The ASPC structure is being reconfigured to include and develop junior personnel by providing opportunities for research, future concepts development, and participation in the Air and Space Power Ethical Concept Team (ASPECT).
- **ASPC Fellows.** SERCAT 3 positions in ASPC will be used to support specific research efforts into air and space power topics that arise from AFSTRAT and Jericho 21.
- **Academic mentoring and editorial support.** Using LOE 1's forum to identify potential talent, the ASPC will offer academic mentoring and editorial process to support those individuals in pursuit of professional mastery.

LOE 3 – STRATEGIC APPRECIATION AND OPTIONS

THE NEED

Air Force lacks a group to coordinate assessment of, and respond to concept development and strategic dilemmas, similar to the USAF's Checkmate and Project Everest groups.

LOE 3 supports ASPC Objectives 1 and 4.

THE INTENT

The ASPC will stand up a Strategic Appreciation and Options Team (SAOT). The SAOT will provide the core of Air Force's strategic appreciation and options capability and tailor the composition and focus of these efforts it IAW CAF demand signals. The intent of LOE 3 is to:

- Identify possible strategic futures for the application of air and space power.
- Conduct strategic red-teaming activities at the necessary level of classification and compartmentalisation to meet CAF's needs.
- Build and leverage multidisciplinary and multiagency relationship to allow the consideration of the full range of potential strategic consequences of possible air and space power options.

- To coordinate and be the foundation of the Future Air and Space Operating Concept (FASOC) Working Group.

An effective strategic futures capability is reliant on the convergence of the right people, the rights skills, at the right level of security, at the right time. To meet this imperative, the ASPC will:

- Seek SLT/SeLT recommendations for SME representation in strategic futures activities, noting that a Positive Vetting clearance will be the norm.
- Arrange strategic futures training for selected participants as required.
- Coordinate and convene strategic futures activities when required.



LOE 4 – DOCTRINE



THE NEED

Verbose, repetitive and out of date doctrine precludes optimum use of air and space power within the Joint Force. We need doctrine that is up-to-date, useable, and consistent with our culture and values.

LOE 4 supports ASPC Objectives 1 and 4.

THE INTENT

The ASPC will provide a conduit for management of review and input to Joint doctrine. Additionally, ASPC will develop relevant Air Force publications that are complementary to joint doctrine in accessible and digestible forms. To achieve this intent, the ASPC will:

- Coordinate SME review and Air Force feedback on Joint doctrine so that it is fit for purpose across all services.
- Advocate for the Joint Doctrine Modernisation project to pursue contemporary digital delivery formats.
- Apply a Program Management approach to Air Force publications and Joint doctrine for which CAF is the designated lead.
- Develop and publish updated Air and Space domain manuals, outside of but complementary to the joint doctrine framework, in formats that are usable and accessible.
- Work closely with AFTG to ensure visibility of doctrine updates so they can be incorporated into PME with minimal lag.
- Establish a pool of SERCAT 3 'lead authors' to work with relevant SMEs to expedite doctrine development, while minimising operational impact to Air Force.

LOE 5 – ENGAGEMENT



THE NEED

Air Force is not the only place from which the best air and space power ideas for Australia's future may arise. Coherent and enduring engagement with academia, think-tanks and OGA, as well as our partners and allies, is critical to the ASPC's success, and that of air and space power.

LOE 5 supports ASPC Objectives 1, 2, 3 and 4.

THE INTENT

The ASPC will act as the focal point for engagement with other organisations regarding air and space power future concepts and strategic issues. The ASPC accepts it is not the single home of air and space power thinking, but is instead a centre of gravity to draw the best air and power thinking together. To achieve this intent the ASPC will:

- Provide a single point of entry and engagement with think tanks, academia, OGA, Defence industry and partners and allies for air and space power future concepts and strategic issues.
- Utilise outplacement positions to build enduring engagement relationships, supported by targeted collaboration efforts that lead to partnered activities and events.
- Ensure relationships between Air Force and other entities will evolve to be organisational ones that survive beyond posting cycles.



LOE 6 – PROFESSIONAL MASTERY



THE NEED

Our PME needs to contain the necessary baseline of air and space power content to enable our people to compete their duties. But CAF also requires those who will lead our organisation, the senior enlisted, commissioned and civilian staff, to go beyond the PME baseline and actively and continuously pursue air and space power professional mastery.

LOE 6 supports ASPC Objective 2, 3 and 4.

THE INTENT

The ASPC will encourage and support both PME and professional mastery across Air Force. The ASPC will achieve this intent by:

- Providing air and space power content advice to AFTG and AWC for inclusion in their respective courseware.
- Providing courses for those who deliver of air and space power education as well as an online, future-focused 'Advanced Air and Space Power Course' to replace its previous online courses.
- Supporting other, externally provided Air and Space Power professional mastery courses, leveraging its networks in academia, think-tanks and OGA to ensure these offerings contain the best possible content.
- Encouraging a culture of continuous pursuit of professional mastery and currency by fostering SLT/SeLT and Command commitment to it.

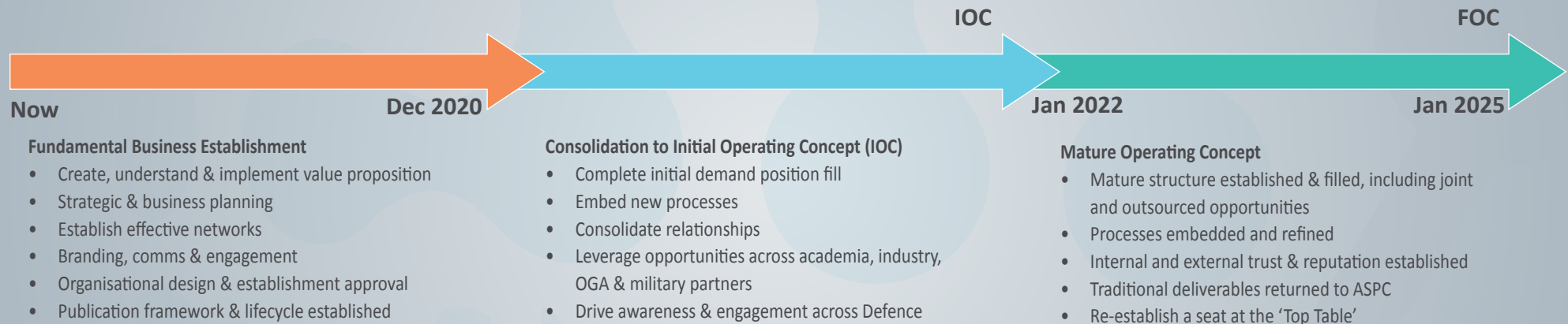


OUR PATHWAY



For the ASPC to realise its potential, it will require dynamic, forward-thinking personnel. This is a critical enabler of ASPC’s phased program of work (see Figure 3 below), which is ambitious, but not overly aggressive. This is achievable with the right level of support, but will fail if that support is withheld.

FIGURE 3. OVERVIEW – OUR PATHWAY





AIR AND SPACE POWER CENTRE