THE AIR CAMPAIGN: THE APPLICATION OF AIR POWER



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THE AIR CAMPAIGN: THE APPLICATION OF AIR POWER

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Preamble

This, the second CAF Occasional Paper, *The Air Campaign: The Application of Air Power*, builds on the themes introduced in the first, *Air Power for Australia's Security: More than the Three Block War*. This second paper provides a strategic overview of what the RAAF describes as an air campaign. Air campaigns are the means by which the RAAF plans and conducts the application of air power as a vital partner in the ADF's contribution to national security.



Importantly, this CAF Occasional Paper is much more than an operational view of the RAAF's air power. It describes how the RAAF deals with the complexity of planning and executing an air campaign and ensures that air power assets are used to their optimum. They are designed to ensure that every air operation is carefully and transparently linked to the achievement of military and national strategic objectives. Air campaigns deliver two key outcomes—they aim to achieve the necessary degree of control of the air to enable friendly force manoeuvre and they create a



wide range of decisive effects that contribute to the achievement of joint, coalition and multi-agency objectives.

My intent for these CAF Occasional Papers is to make interested decision-makers, policy makers and strategists, along with the interested public, aware of air power issues of importance. Issues that will be discussed in these papers are primarily at the strategic level, with content at the operational level when that is an essential component of the argument. However, irrespective of level, my intent is that the argument be illustrated with real-world examples that add colour, context and understanding for readers.

CAF Occasional Papers will be produced as needed, rather than to a fixed schedule. Comment on the publication and enquiries on air power related matters are welcome and should be forwarded to the Air Power Development Centre.

This paper, *The Air Campaign: The Application of Air Power*, was written at my direction. The paper brings out strategically salient points regarding the employment of air power to meet national security requirements, and provides a background to the difficult decisions that may have to be taken at the highest level in Defence and the Government. Although the paper is written from the perspective of the Royal Australian Air Force, it may have broader application for other like-minded air forces.

I endorse the views expressed in this paper and commend it to you.

G.D. SHEPHERD, AO Air Marshal Chief of Air Force

Air Force Headquarters April 2008





INTRODUCTION

The Royal Australian Air Force, by choice, uses the term *air campaign* to describe the contribution air power makes in joint, coalition and multi-agency campaigns in support of national security objectives.

An air campaign is the controlled conduct of a series of interrelated air operations to achieve specified objectives. The conduct of effective air campaigns is the hallmark of all successful air forces. Effective air campaign planning is founded upon the professional mastery of air force personnel which includes an understanding of the interface between military and other national security operations. Professional mastery is of particular importance in designing superior campaigns, and critical to smaller air forces like the RAAF that have resource and capability constraints. The RAAF has participated in decisive air campaigns throughout its history and in the recent past has made valued contributions alongside major coalition air forces in Afghanistan and Iraq. It has also played a major role in humanitarian assistance operations in response to terrorist activities like the 2002 Bali bombings, and natural disasters like the 2004 Boxing Day Tsunami and the 2005 earthquake in Pakistan. In all these cases the RAAF's flexible and



responsive air power assets in carefully planned and executed air campaigns have delivered timely mobilisation, rapid deployment, decisive fire power, comprehensive situational awareness and essential support when and where required. These ends have always been delivered with the RAAF as part of a team, highlighting the essentiality of a mature, joint approach to crisis resolution.

The conduct of effective air campaigns is the hallmark of all successful air forces. Effective planning is founded upon the professional mastery of air force personnel which includes an understanding of the interface between military and other national security operations.

Other air forces choose alternative terms to describe the air campaign process and the orchestrated application of air power. Flexibility in the interpretation of the term air campaign is a reflection of the freedom that strategically focused air forces have to determine the optimum employment of air power. Although explained in different terminology, the doctrines of the USAF and the RAF also include the same fundamental processes and considerations for air campaigning that the RAAF uses. The RAAF applies these fundamental principles of air campaigning to meet its national security responsibilities.

In the RAAF the term *air campaigning* is used to describe the process of planning and executing air campaigns. Skillful air campaigning ensures that the RAAF achieves the required outcomes through the efficient, effective and sustainable use of its air power assets. The employment of air power attracts disproportionately high political and public attention. Therefore, the RAAF needs to be skilled in air campaigning to ensure the effective and discriminatory application of air power in contributing to the achievement of the national strategic aim. These skills also ensure the optimum use of the





RAAF's air power assets. The combination of the RAAF's modern air power systems, world-class training and air campaigning skills realise the full potential of the force, providing Australia with an 'edge' that is vital to its national security.

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Responsive Humanitarian Aid

On Boxing Day 2004, a large earthquake off the western coast of Indonesia triggered a series of tsunamis that resulted in the death of some 230,000 people across the region. In response, the Australian Government instructed the ADF to provide humanitarian assistance immediately to the affected area. Operation *Sumatra Assist* was quickly launched.

Time was of the essence, and an air campaign to provide vital support began almost immediately with the launch of C-130 transport aircraft to provide aeromedical evacuations and airlift of cargo and personnel from and into the disaster area. The first wave of aircraft also carried Air Operations Centre (AOC) staff and systems, to assist in the timely coordination of what was to become a vast multinational relief operation. The air effort from all nations was coordinated through a coalition AOC, with staff from Australia, Indonesia, Singapore and the USA, at Medan airport. Operational planning and control of ADF and RNZAF fixed-wing aircraft was done at the AOC by ADF personnel. The professional mastery of the RAAF personnel ensured that they integrated effectively into the coalition AOC.

The RAAF air campaign in Operation *Sumatra Assist* made a vital contribution in a major joint, coalition operation that undoubtedly saved many lives. The responsiveness of air power and its ability to reach into a demanding physical environment was essential to provide relief in the immediate aftermath. Over the following weeks, the nature of the air campaign changed, to provide ongoing airlift and other support to a wide range of partner forces and non-military organisations.

In Operation *Sumatra Assist*, the RAAF's air campaigning skills enabled the conduct and sustainment of a demanding air campaign, achieving a humanitarian outcome and contributing to the Government's strategic engagement in the region.

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The Purpose of Air Campaigns

Contemporary conflict is extremely complex and the demands are such that no single Service can resolve them by acting alone. Hence the ADF's joint focus. The design, organisation, sequencing and direction of military campaigns to achieve chosen strategic goals require the skilful employment of available forces. The crafting of an effective campaign is dependent on the professional mastery of commanders. From an air power perspective, such mastery is epitomised in the balanced conduct of air campaigns that use and apportion available air power to achieve the desired effects and outcomes in joint campaigns.

The crafting of an effective campaign is dependent on the professional mastery of commanders.

The RAAF offers Australia the means to act responsively to create the effects needed to achieve decisive outcomes across



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the breadth of the nation, the region and wherever its global interests are engaged. It provides the robustness—strategic depth in military terms—needed to deal with emergent threats through the entire spectrum of conflict, ranging from highend conventional warfighting across large theatres to localised humanitarian operations. The air campaign is the commander's means of coordinating the employment of air assets to ensure that they contribute effectively to the achievement of the overall joint objectives.

The RAAF provides the robustness—strategic depth in military terms—needed to deal with emergent threats through the entire spectrum of conflict, ranging from highend conventional warfighting across large theatres to localised humanitarian operations.

The breadth of coverage and scale of operations of an air campaign often makes it the most pervasive in a theatre of operations. The RAAF's speed of manoeuvre, perspective and reach enables it to create multiple effects concurrently or in rapid succession in and around one or more theatres as required. This capacity allows it to influence and, if necessary, dominate the air, maritime and land environments. Air power's influence can also permeate into the non-military domains and support a whole-of-government approach to national security.

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Control of the Air: A Critical Element in Joint Operations

All operations in the joint campaign, including the employment of air assets, are dependent on having the necessary degree of control of the air in and around the theatre of operations. Control of the air, while not an end-state in a joint campaign, is the essential precondition for joint forces to conduct air, land and maritime surveillance, influence and response operations. It must therefore, be established at the earliest opportunity across the entire theatre of operations. Counter air operations conducted to establish the necessary degree of control of the air remain the fundamental and primary consideration in air campaign planning.

Control of the air, while not an end-state in a joint campaign, is the essential precondition for joint forces to conduct air, land and maritime surveillance, influence and response operations.

In some scenarios, however, it may not be necessary to carry out counter air operations. For example, joint campaigns conducted in environments where there is no adversary air threat may not warrant such operations. In other scenarios, the presence of capable friendly air forces and the demonstrated intent to use those forces to establish control of the air will itself provide sufficient deterrence to inhibit an adversary from contesting control of the air. Such deterrent capability evolves from long-term investment in equipping, training and sustaining effective offensive forces, as well as a carefully managed program of exercises and other activities to demonstrate capability. Combined with an unambiguous national will to apply appropriate air power in support of national security objectives, this provides a powerful strategic deterrence.





In the contemporary security environment, the likelihood of ADF operations being completely free of enemy air threat may not always be the case. The RAAF must therefore maintain a superior counter air capability and ensure the professional mastery necessary to plan and conduct decisive counter air operations as part of a joint campaign.

Where control of the air is contested, offensive air operations to establish friendly control of the air to the desired degree must be conducted as the first stage of the air campaign. All friendly air and surface operations will be at high risk as long as an adversary has the intent and the air power capability to interfere effectively with them. When faced with such an adversary who would contest control of the air, establishing friendly control of the air will be a complex operation and may warrant an independent air campaign.

Where control of the air is contested, offensive air operations to establish friendly control of the air to the desired degree must be conducted as the first stage of the air campaign.

There could also be a scenario, however remote in the Australian context, wherein achieving joint strategic objectives outweighs all other considerations. For example, this could be when the nation is faced with an existentialist threat involving a conflict for national survival. It would then be necessary to conduct joint operations despite the active presence of an adversary air threat. Under such circumstances, the air campaign should be orchestrated to include an aggressive counter air effort, to facilitate successful joint operations even where the risk to friendly air and surface forces is extreme. Since the consequences of failure in these circumstances would be of such a magnitude, decisions to accept the associated risks to ADF capability would have to be made at the highest level of military command and Government.



CREATING DECISIVE EFFECTS

The aim of the air campaign is the integrated application of the RAAF's air power to create effects that are so well harmonised with the actions and effects of the joint force that the interface appears to be seamless. Such seamlessness is achieved by the coordinated and complementary planning and execution of the maritime, land and air campaigns.

The RAAF achieves the necessary balance to operate in and beyond the theatre of operations, across the entire spectrum of conflict, by ensuring that it is capable of optimum performance in three key tasks:

- The capability to understand the characteristics of the operating environment and the ability to know and share events taking place within it, aspirationally in real time.
- The ability to shape, that is influence and manage the conflict space, where and when necessary and to the desired degree.
- The ability to respond with a carefully tailored, proportional and timely application of air power as part of a joint or multi-agency campaign to create the needed effects.

The air campaign coordinates air operations to create the timely effects judged necessary at the appropriate time and at locations that could be local, regional or even global.

The aim of the air campaign is the integrated application of the RAAF's air power to create effects that are so well harmonised with the actions and effects of the joint force that the interface appears to be seamless.



The success of any joint campaign is dependent on the air campaign delivering, as a minimum, two key outcomes. The first is the establishment of adequate control of the air to allow uninhibited freedom of operations to the joint force and the second, to contribute to the joint force objectives by creating decisive effects in a dynamic operational environment.

On-Mission Flexibility: Creating Decisive Effects

RAAF AP-3Cs operating in the Middle East Area of Operations (MEAO) conduct a range of missions. They regularly carry out an overland Intelligence, Surveillance and Reconnaissance role—developed and perfected while undertaking warlike operations in theatre—in addition to their traditional maritime patrolling roles. The potent combination of the advanced systems onboard the AP-3Cs, professional mastery of the aircraft crews and the integration of these operations into the coalition campaign through a responsive and effective command and control network allows the AP-3C crews to exploit fully the aircraft's flexibility. The crews regularly swing (change) roles during a mission, from supporting surface forces conducting counter-IED (Improvised Explosive Devices) missions, to conducting security operations. These missions are also carried out independently or integrally with coalition air operations to support surface force manoeuvre.

RAAF skills in orchestrating effective air campaigns ensure that the flexibility inherent in air assets such as the AP-3C is carefully aligned with other joint and coalition missions to use the full breadth of its onboard Intelligence, Surveillance and Reconaissance (ISR) systems to create decisive effects in a major coalition campaign.





The Conduct of Air Campaigns

An air campaign includes all air operations, conducted simultaneously or consecutively, to create decisive effects in combat, contribute to the actions of other forces and shape the space in and around the theatre of operations. Air power's inherent characteristics of reach, penetration, speed and responsiveness can be leveraged to achieve joint campaign objectives. Dependent on the needs of the joint campaign, air operations may be conducted independently or in coordinated operations with surface forces.

Air power's inherent characteristics of reach, penetration, speed and responsiveness can be leveraged to achieve joint campaign objectives.

For example, air operations can neutralise an adversary's centre of gravity that is beyond the operational range of surface forces, engage time sensitive targets and avoid potential political and societal



fallouts that restrict the use of surface forces. These advantages of air power often lead to it being selected by government and military leaders as the first choice option in the exercise of national power. However, in all instances, the use of air power and the degree of integration with surface forces will be guided by the requirements of the joint force commander in support of national security objectives.

All air campaigns are planned and executed in the context of the joint campaign and could be of short or protracted duration. The priorities within an air campaign could vary significantly from the initial response through to the completion of the joint campaign. An air campaign includes persistent air operations to apply force, meet the demand for situational information and deliver logistic support to sustain, deploy and manoeuvre friendly forces by air in and around the theatre of operations.

The priorities within an air campaign could vary significantly from the initial response through to the completion of the joint campaign.

AIR CAMPAIGNING EXPLAINED

Air campaigning encompasses the process of planning, conducting, sustaining, assessing and adapting the application of air power to meet strategic and operational objectives. Effective air campaigning ensures the optimum application of air power to achieve the commander's intent. Integrated campaign planning with joint or coalition forces creates a systemic depth that would mitigate any potential vulnerability in both air power and joint force contexts.



Effective air campaigning ensures the optimum application of air power to achieve the commander's intent.

The process of air campaigning is built on the timely and appropriate use of air power systems, platforms, personnel, infrastructure, missions and roles to achieve the strategic, operational and tactical effects required to succeed in a joint campaign. Air component commanders determine the appropriate command structure, the combination of air assets and concepts of air operations that should be employed to deliver air power tailored to meet the specific demands of joint, combined or coalition campaigns. The air assets used could be drawn purely from the RAAF, be a combination of air assets from all Services and could include air forces of partner nations.

The effectiveness of a coalition air campaign depends on adequate system interoperability, commonality of doctrine and concepts of operations, shared strategic objectives and long-term investment in joint training and exercises brought together by mutually respected professional mastery. Efficient air campaigning ensures that the joint effects required are achieved with minimal waste of effort and at a tempo that is not debilitating to the air force in the long term. This is critical for smaller air forces with limited but high-capability assets. The competent application of air power to achieve precise effects that contribute to the desired outcomes in joint campaigns is the essence of an air campaign. The effects so created will be carefully aligned with the larger national security objectives pursued by a whole-of-government approach.



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Air Campaigns Within a Whole-of-Government Approach

The highest level of military planning is the preparation of a military strategy that directs the ADF's contribution to national security within a whole-of-government approach. Military strategy guides the ADF's force structure development and preparation for military operations within the national security policy. It lays down meaningful tasks for the ADF and describes the strategic effects and outcomes to be achieved by the force. An air campaign is the air power element of military operations conducted within the military strategy.

The process of air campaigning aligns the tactical application of air power and the planning and execution of air campaigns to joint campaign objectives and the military strategy. Through this vertical interface, air campaigns are planned and directed to ensure that the effects they create in joint military campaigns are also synchronised with the diplomatic, economic and information efforts embedded in a whole-of-government approach.

An air campaign is the air power element of military operations conducted within the military strategy.





The complex and dynamic nature of contemporary security operations and the increasingly clever and adaptive adversaries who may be encountered necessitate constant adaptation of strategy as the campaign progresses. This potential for rapid change makes the interface between the strategic and operational levels vital to the success of air campaigns. This interface is critical for air component commanders to ensure that all air operations are aligned with the joint commander's strategic direction and conducted to achieve the joint campaign objectives.

Air campaigns are planned and directed to ensure that the effects they create in joint military campaigns are also synchronised with the diplomatic, economic and information efforts embedded in a whole-of-government approach.

The linkages between the highest levels of Government all the way down to operational military command can create the potential for national level decision-makers and senior military commanders to be able to reach down and directly influence air campaigns and even specific air operations. Air component commanders must possess the perspective and understanding to accommodate such influences from all levels of command and the moral courage to provide frank advice on the operational implications of the higher guidance being provided. The professional mastery of the air commander will be the cornerstone to ensure that higher level guidance given from a wider strategic perspective is enacted through carefully planned and executed changes to the air campaign. Air forces that are so directed will be able to influence and shape the strategic environment to their advantage.





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AIR CAMPAIGNS IN JOINT OPERATIONS

Australia's geo-strategy and the breadth of its national interests mean that the ADF is likely to be called upon to undertake a range of diverse operations—joint, multi-agency or coalition— to ensure national security. All ADF operations are commanded by the Chief Joint Operations Command (CJOPS), on behalf of the Chief of the Defence Force (CDF). The three Services contribute the necessary forces to establish a joint force under a Joint Task Force Commander to conduct these activities. The Joint Task Force Commander is assisted by the maritime, land and air component commanders who are assigned specific tasks and provided the necessary forces to complete those tasks. These component commanders have the operational authority to employ the forces under their command as required. The Air Component Commander (ACC) plans and executes air campaigns, synchronised with maritime and land campaigns, to achieve the Joint Task Force Commander's objectives. All RAAF air campaigns are conducted within this joint ADF framework.



Joint campaign planning at all stages ensures that air power assets of all Services are integrated to avoid interference and fratricide. It also ensures that all organic air power is employed in consonance with the larger air campaign objectives.

Joint campaign planning at all stages ensures that air power assets of all Services are integrated to avoid interference and fratricide. It also ensures that all organic air power is employed in consonance with the larger air campaign objectives. For example, counter air capabilities, such as AAW ships and the Army's Ground Based Air Defence systems, can be integrated with the RAAF's counter air campaign to achieve control of the air over a theatre of operations. Naval combat vessels could provide persistent air surveillance and operate as an anti-air missile shield as part of an integrated air defence system. Effective air campaigning requires professional mastery to integrate air power from different sources to achieve decisive effects.

Effective air campaigning requires professional mastery to integrate air power from different sources to achieve decisive effects.



Command and Sustainment of Air Campaigns

The emerging security environment is such that air campaigns will continue to be conducted both during times of hostility and in normal peacetime conditions. Some of these campaigns will also be conducted concurrently, thereby creating stringent demands on the RAAF's limited resources. Irrespective of the proximity or otherwise of the theatre of operations, air campaigns will be shaped by the underlying need for timely deployment, manoeuvre and sustainment of air power assets across great distances and in a variety of environments.

Command

Air campaigns are centrally planned and commanded to ensure that air effort is allocated to meet strategic priorities across all areas of operations. The basic air power tenet of centralised planning and decentralised execution is the RAAF's philosophy for the employment of air power. Decentralised execution of the air campaign guarantees the use of the inherent flexibility and responsiveness of air power to the greatest effect. Decentralised execution is ensured by the ACC meticulously giving subordinate commanders adequate tactical autonomy in air campaigning, while monitoring the progress and exercising command at the strategic level.

The basic air power tenet of centralised planning and decentralised execution is the RAAF's philosophy for the employment of air power.



Centralised command ensures that air campaigns remain focused on joint strategic outcomes and air power assets are allocated based on priorities that best meet the joint and coalition objectives across the theatre of operations. On the other hand, decentralised execution ensures that subordinate commanders fully exploit the strengths of air power, like versatility, responsiveness, penetration and precision, in a flexible manner to meet the objectives of the air campaign in coordinated tactical actions. Professional mastery of the highest order is a prerequisite for commanders at all levels for the RAAF to be able to conduct a well orchestrated air campaign.

Sustainment

At all stages of the joint campaign, air power assets assigned to the joint task force must receive effective operational systems, adequately trained personnel and logistic support to sustain all operations deemed necessary. The RAAF's capacity to prepare and sustain forces in joint operations is vital for the success of air campaigns. Since the tempo of air operations will vary in the course of a joint campaign, mastery in air campaigning is essential to maintain the correct balance between operational tempo and the sustainment capacity of the RAAF. The balance between the two will be scenario-dependent and vary across the full range of operations, from high-end conflict to humanitarian assistance.

Since the tempo of air operations will vary in the course of a joint campaign, mastery in air campaigning is essential to maintain the correct balance between operational tempo and the sustainment capacity of the RAAF. Maintaining this balance, especially in long-drawn campaigns, is complex. The RAAF must be able to conduct effective air operations while preserving the ability to regenerate the force during and after operations. This concurrent activity will also have to take into account the long-term plans of the RAAF in terms of force structure and capability development. Strategic judgements made by the RAAF senior leadership on the resources required for current and future force sustainment form the basis for dialogue with the Government to ensure that the RAAF retains the capability to meet its national security responsibilities.

Ongoing liaison between the ACC embedded in the joint force and the RAAF organisation responsible for raising, training and sustaining forces for operations is crucial to maintaining the appropriate balance between operations and sustainment. The RAAF has a robust command linkage between these two parts, which ensures its capacity to sustain air operations and shapes the planning and conduct of air campaigns.

Strategic judgements made by the RAAF senior leadership on the resources required for current and future force sustainment form the basis for dialogue with the Government to ensure that the RAAF retains the capability to meet its national security responsibilities.

Joint campaigns that demand high tempo of air operations for prolonged durations, such as one that is countering a dire threat to national security, might necessitate the curtailment of long-term force generation activities in order to sustain the necessary tempo and duration. This decision will have to be made at the highest level as the long-term risks associated are extremely high. It must also be noted that, in almost all cases, this would not be a viable option for smaller air forces in the long term. In all other cases air



operations will be planned and conducted at a tempo that the force can sustain for far greater periods, even indefinitely if required.

Professional mastery in air campaigning ensures that air operations maintain the necessary tempo critical to achieve joint objectives while retaining sufficient capacity to sustain operations for the duration required. Air campaigns are by nature dynamic and will adapt to meet the changing demands of joint campaigns. Maintaining the correct balance between operational tempo and force sustainment activities while catering to the demands of the joint campaign could make the difference between success and failure of the air, and potentially, the joint campaign.

Professional mastery in air campaigning ensures that air operations maintain the necessary tempo critical to achieve joint objectives while retaining sufficient capacity to sustain operations for the duration required.

Leveraging Air Power Flexibility

The relationship between air, land and maritime operations in a joint campaign changes as the campaign progresses. Each environmental element becomes the supported and supporting force dependent on the emerging scenario. For example, there could be instances when due to geographic constraints, the demands for responsiveness or the presence of superior hostile surface forces, the application of air power will be the only option available to the joint commander. At these times the air campaign will be the lead environmental campaign and will be accorded the highest priority within the joint campaign.





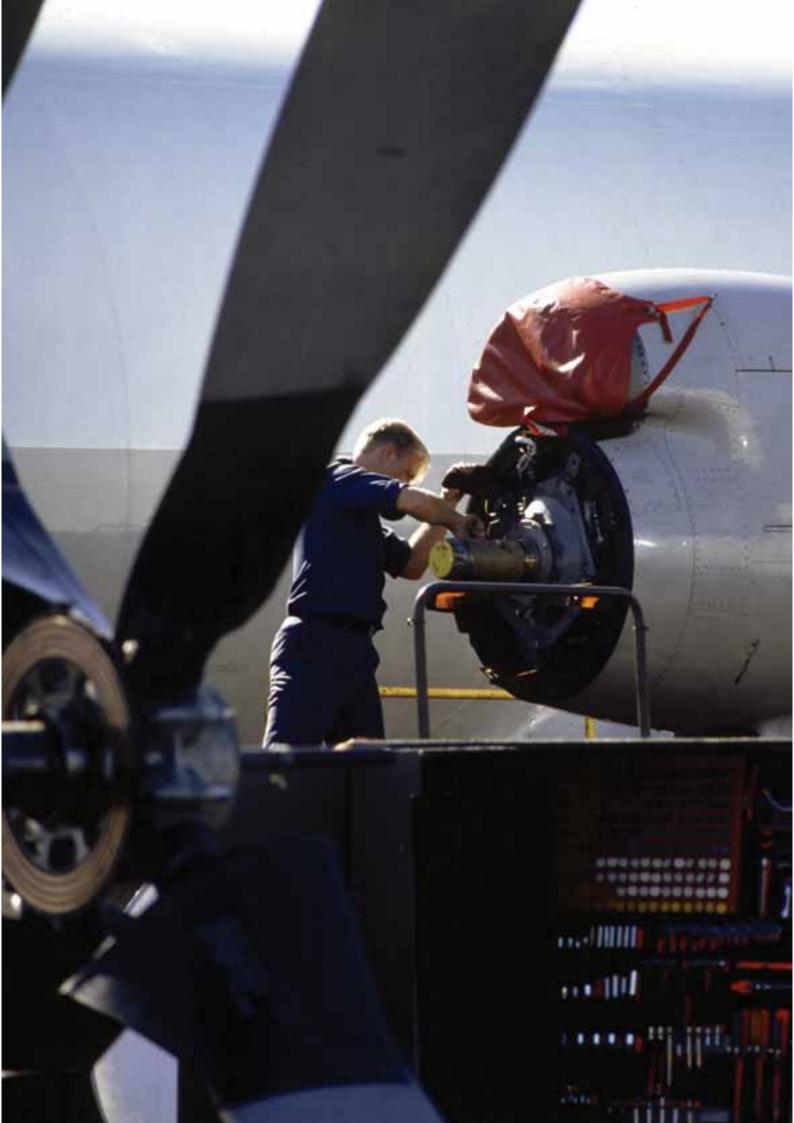
At other stages of the joint campaign, the air campaign will provide precise and timely support to surface operations that may be the main effort. Centralised command of air campaigns by the ACC ensures that the allocation of air effort is effective and sustainable during all phases of the joint campaign and is concentrated at the right time and place, within the context of the joint campaign, to tip the balance in favour of friendly forces.

There could be instances when due to geographic constraints, the demands for responsiveness or the presence of superior hostile surface forces, the application of air power will be the only option available to the joint commander.

Other than in the campaign to establish control of the air, air operations can shift the priority as required to create a broader range of effects that contribute directly to joint objectives. This range of air operations will continue for the duration of the joint campaign, aligned with the joint commander's priorities. In resource-constrained smaller air forces, the flexibility afforded by the multi-role capability of modern air power systems will be invaluable. Employed professionally and innovatively, such capabilities will allow the conduct of a broader range of air operations while retaining the responsiveness needed to engage alternative targets in line with the joint force commander's strategic objectives.

Within a secure air environment, the joint force's air power will have the freedom to operate within and beyond the theatre to create precise, proportionate and decisive effects. Through a range of operations, the air campaign can create strategic effects to influence an adversary directly, engage adversary forces to achieve operational outcomes, create the preconditions for a surface





force advance or shape the environment for further stabilisation operations. These air operations can be conducted independently or in conjunction with surface force action to achieve joint objectives. Independent air operations have the potential to avoid the deployment of surface forces into hostile territory that could have unfavourable political or societal implications. The ACC exercises the flexibility inherent in air power to adjust the air campaign plan to meet the joint commander's intent.

In resource-constrained smaller air forces, the flexibility afforded by the multi-role capability of modern air power systems will be invaluable.

Flexibility in a Networked Force

Air campaigns can integrate the use of RAAF air power assets in key roles as sensors, command and control nodes and engagement systems in networked forces. Such air assets can provide timely information that can be shared across all forces in an area of operations to enable the decision superiority that will be a winning advantage in future conflicts. Modern air assets can also enhance the command and control function of the network by providing responsive, wide-ranging communications links to connect forces throughout the theatre and facilitate the synchronisation of all elements of the joint force. Multi-role aircraft such as the AP-3C Orion have long demonstrated the capability to collect and disseminate information and act as command links. Increasingly, such networking can also be enhanced by innovative use of the extensive communications systems carried by transport and other aircraft to operate as nodes in the networked force.

In the future, specialised platforms such as Airborne Early Warning and Control aircraft and multipurpose aircraft such as the JSF, with state-ofthe-art sensors and communications systems, will enable the ADF to realise the networked information and command system that will be essential to meet the shortening timeframes of modern conflict. As part of its transition to the future, the RAAF is continually developing and adapting its air campaigning skills to integrate these powerful new systems seamlessly into the networked joint force.



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Professional Mastery and Air Campaigns

Air campaigns are most effective when planned, commanded and executed by commanders skilled in the generation and optimum application of air power. This demands an in-depth comprehension of air power nuances complemented by a clear understanding of the close alignment between national security directives of the Government and the grand strategic guidance that is translated to the military strategic intent of the CDF. It also requires discerning knowledge of the linkage between CDF's intent, joint campaign objectives and the application of air power to create proportionate and tailored effects through precise control.

In ADF operations, these air commanders will always be drawn from the RAAF, the principal repository of Australia's air power. Effective air campaigning is vital to the long-term efficacy of the employment of air power. Therefore, the RAAF has an ongoing development plan for the future to improve this dimension of its professional mastery.



In ADF operations, these air commanders will always be drawn from the RAAF, the principal repository of Australia's air power.

The professional mastery of the air staff who plan and execute air campaigns is dependent on adequate knowledge and technical mastery of their air forces' operational capabilities. They must have the skills to ensure that the air campaign leverages off the strengths of air power, like flexibility, responsiveness and perspective, to achieve the necessary outcomes and to overcome any strategic constraints, such as limitations on forward basing options or overflights. At the same time they must also ensure that the characteristics of air power are used in ways that exploit available opportunities within the strategic guidance.

Air campaigns must be planned and executed in accordance with the prevailing national rules of engagement and yet retain the flexibility to adjust to the dynamism of the joint campaign. Such planning will ensure that air operations create effects that are coherent with those created by the other military domains as well as the diplomatic, economic and information lines of operations. To prevail, air campaign commanders and their staff must be able to operate in a complex multi-agency environment and should be able to make superior decisions at a tempo that creates decision and operational superiority.

The RAAF generates the personnel to plan, execute and command effective and integrated air campaigns through its substantial investment in training, education and career management. This is a long-drawn process, where future Air Component Commanders are developed through a series of increasingly demanding career appointments. This progression includes formal air power education, development of a wide range of operational and



strategic skills, involvement in the organisational and operational areas of the RAAF and experience in conducting and commanding operations in joint and coalition campaigns.

To prevail, air campaign commanders and their staff must be able to operate in a complex multi-agency environment and should be able to make superior decisions at a tempo that creates decision and operational superiority.

The importance of effective planning and execution of air campaigns to make optimum use of RAAF's air power cannot be overemphasised. The RAAF's long view incorporates the intent to generate and sustain these skill sets and to employ them to apply the enhanced air power capabilities of the future to their full potential in seamless ADF operations to ensure Australia's security.





School of Air Warfare

The critical need to develop personnel with the skills to exploit the capabilities of RAAF systems to their full potential in air campaigns is being addressed through specialised training for Air Combat Officers (ACOs) at the School of Air Warfare (SAW). This training complements traditional aircrew competencies, such as airmanship and aviation skills, with a new emphasis on mission command, air battlespace management and air campaign awareness.

The training at the SAW is the foundation of the RAAF's ongoing investment in preparing personnel for the future while being able to enhance the effectiveness of current systems as the ADF moves towards seamless, networked, joint operations. In the near future, these personnel will operate a range of new systems such as UAVs and AEW&C aircraft as they are introduced into RAAF service. Innovation will be a key attribute of all personnel to ensure adequacy of performance under difficult operating conditions. A clear understanding of air battlespace management and air campaign awareness will complement the ACOs' technical mastery of air power systems. Air campaigning skill is a key element of the professional mastery to plan and execute the use of modern systems in air campaigns integrated with joint, coalition and multi-agency campaigns.

The air campaigning training provided by the SAW, enhanced by careerlong professional development, makes an essential contribution to enhancing the effectiveness of the RAAF's air power in air campaigns. By aligning its training processes towards its strategic intent, the RAAF is leading from the front in preparing future air campaign commanders.



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CONCLUSION

Air campaigns are the RAAF's coordinated application of air power to create precise, discriminate effects within the context of a joint campaign. Air campaigns can be independent operations leveraging off air power's characteristics like responsiveness, penetration and reach under circumstances when surface forces may not be able to deliver the chosen strategic outcome. More often, the air campaign will form part of a larger joint campaign, orchestrated with surface forces to achieve the commander's strategic objectives. Air campaigns can also form part of a wider range of military and non-military operations. They can undertake both lethal and non-lethal actions conducted in a multi-agency environment as part of a whole-of-government approach to national security.

Air campaigns deliver two key outcomes—they aim to achieve the necessary degree of control of the air to enable friendly force manoeuvre and they create a wide range of decisive effects that contribute to the achievement of joint, coalition and multi-agency objectives.

Air campaigns are dynamic and complex by nature and their efficient conduct is critically dependent on the professional mastery



of the force and decision-making at the highest levels of military and national leadership. Senior RAAF commanders maintain the delicate balance between the tempo of operations to create the necessary effects and the need to husband the longer-term sustainment of the force. Under dire threats to national security it might become necessary to sacrifice sustainment to achieve vitally important security goals. The gravity of the situation under these circumstances is such that the decision must be made at the highest levels of military and government. RAAF commanders would have to exercise moral courage to provide free and professional advice on the conduct of air campaigns and the implications of these operations on the force, both in the short as well as long term.

Air campaigns are dynamic and complex by nature and their efficient conduct is critically dependent on the professional mastery of the force and decision-making at the highest levels of military and national leadership.

Professional mastery to conduct successful air campaigns is vital to the RAAF, especially since it is a smaller air force with a finite quantum of capability. To secure its operational excellence the RAAF invests heavily in the development of such professional mastery as is needed to manage and employ its capabilities for optimum effect. This ensures that the RAAF continues to be an effective force capable of conducting air campaigns, to support Australia's national security objectives, by the optimum generation and application of flexible air power, now and into the future.







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