HAC STRAT

A STRATEGIC APPROACH FOR AIR AND SPACE CAPABILITY

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VERSION STATUS

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FOREWORD

Every time that I feel an F-35A flying over, I see the sleek silhouette of the Loyal Wingman, I smell aviation fuel at an air base, or I imagine our M2 in formation in low earth orbit, I am humbled to work with visionaries that find ways to reach and surpass the vast and endless aerospace domain each and every day.

We are now in the second century of Air Force, a new fast-moving era for Australian air and space power. The *Defence Strategic Update 2020 (DSU20), Force Structure Plan 2020 (FSP20), and Air Force Strategy (AFSTRAT)* provide the vision, strategic direction and capability framework to prepare air and space power in order to enable the joint force in peace and war.

Nelson Mandela said "Vision without action is just a dream, action without vision just passes the time, and vision with action can change the world."

HACSTRAT combines *the DSU20* and *AFSTRAT* vision with targeted action and a significantly different capability development approach to deliver the scale, complexity and tempo required under the *FSP20*. To achieve the magnitude of change required in a relatively short amount of time requires far more than an edit to the Air Force Capability Manual. HACSTRAT is about step change, not incremental change.

It is critical we disrupt the status quo and continuously transform by investing in the most advanced capabilities and technology. But this alone will not be enough. We need to harness the excellence of our people, as well as the strengths of industry and our trusted partners, in order to reach our potential as a potent and relevant Air Force.

Our future will look very different from the past.

Our entire Defence Force will be one big, integrated system of systems. Air Force's contribution to the joint force will be about realising the unsurpassed advantage of the ultimate high ground – the air and space domains. Our competitive advantage will be in how we use creative and non-prescriptive compositions of capabilities to achieve effects that shape, deter and respond.

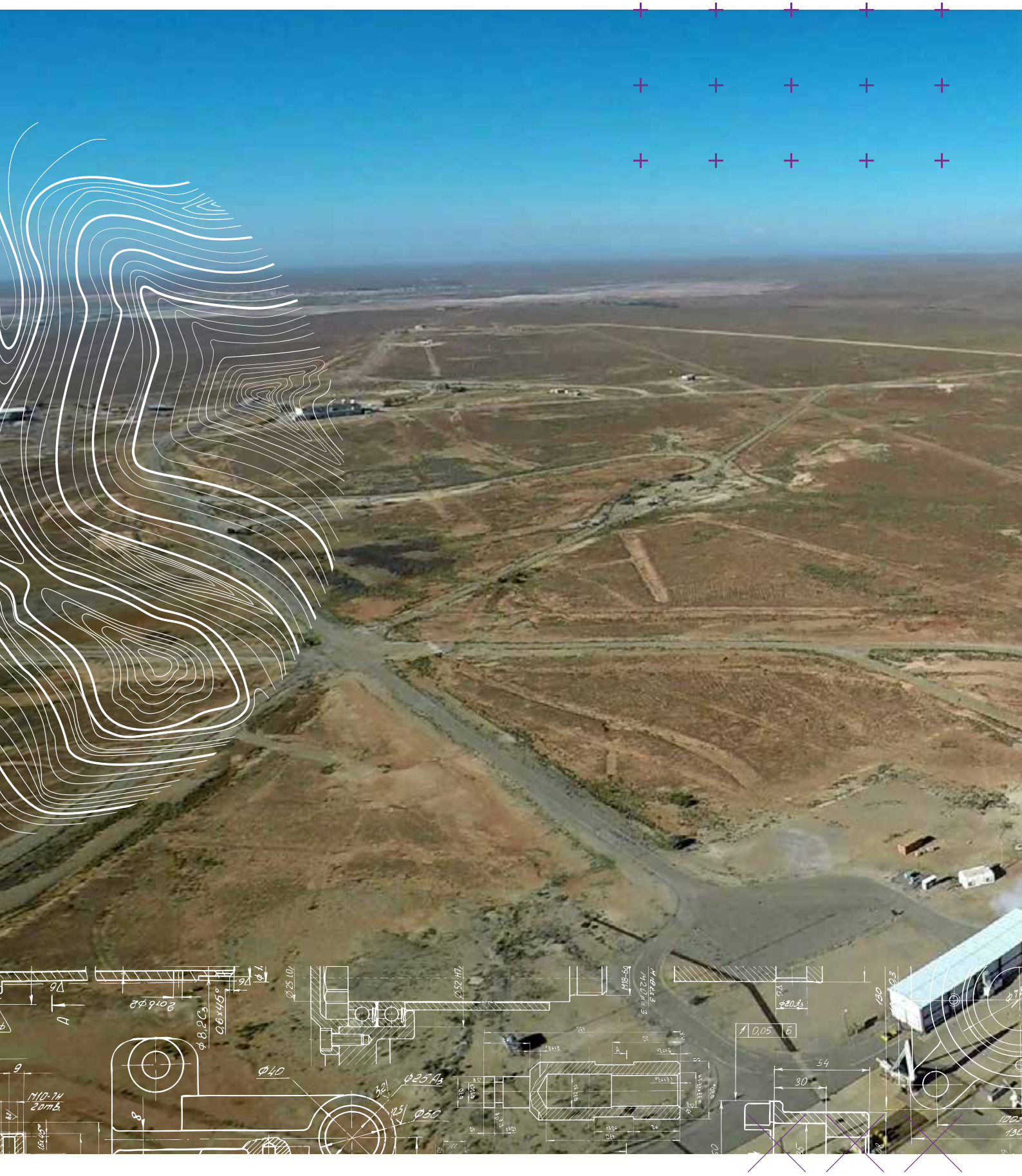
HACSTRAT provides the framework to enable us to deliver air and space power capability for the joint force in a strategic, contemporary, integrated and agile way. HACSTRAT will transform the way that air and space capability is delivered through a set of design principles and a significant focus on modelling, experimentation and multi-level red teaming. The aim point is an Air and Space Power Blueprint that will articulate the future through a capability lens. The Blueprint is not static, it will continue to adapt to meet the joint force's capability needs at the speed of relevance.

We will move beyond traditional models and mindsets to harness the creativity of our people and partners to bring our capabilities together in new and unpredictable ways. We will nurture bottom-up innovation and partnerships with Australian industry and academia to deliver user-centric capability to solve our challenges and provide rich learning experiences for our people.

There is no more exciting and challenging place to be right now. Each one of us has a role to play in shaping the future and transforming Air Force to be a force for good in a rapidly changing world – to protect Australia's freedom, values and way of life.

AVM Cath Roberts, AM, CSC
Head of Air Force Capability
July 2021

AIR & SPACE CAPABILITY



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CHAPTER 1
FUTURE READY AIR AND SPACE CAPABILITY

THE GEO-STRATEGIC ENVIRONMENT IS MORE COMPLEX THAN EVER. CHANGES TO THE GLOBAL ORDER AND THE INTERSECTION OF DEEP STRATEGIC CURRENTS IMPACT ACROSS THE WORLD.

STRATEGIC ENVIRONMENT

Australia has one of the world's most technologically advanced and effective small Air Forces. Nonetheless there are three main reasons why we must change our approach to capability.

Firstly, Air Force has historically replaced capabilities on a 'like for like' basis. This approach limits the future force's capacity to leverage new concepts, ideas and technologies.

Secondly, the pace of technological change is faster than current acquisition timeframes; making it difficult to adapt to a rapidly changing geo-political reality with increasingly sophisticated competitors.

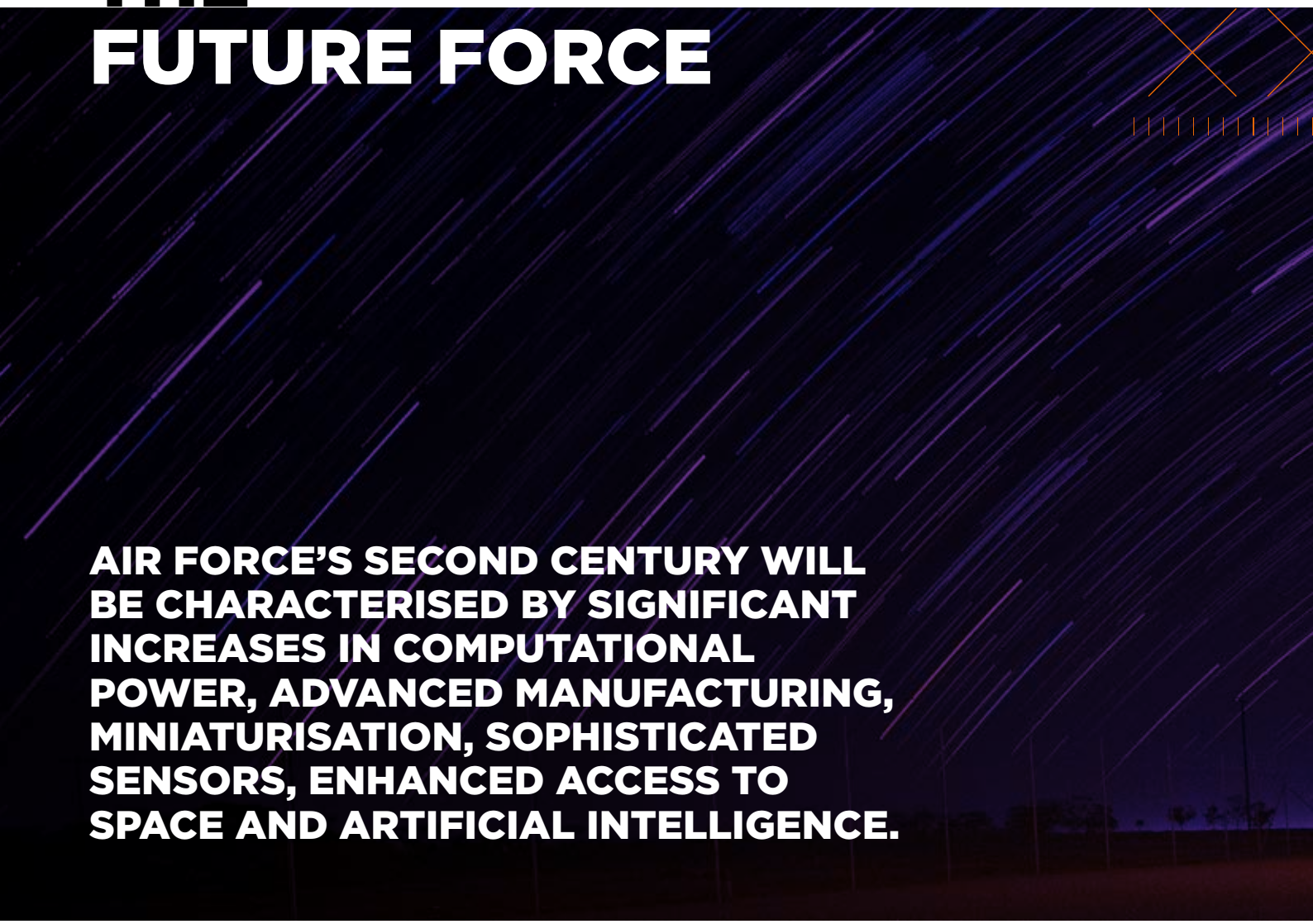
Thirdly, we need to move away from a platform-centric approach to an effects-based systems-of-systems approach. This reality has been captured in the Government's *Defence Strategic Update 2020 (DSU20) and Force Structure Plan 2020 (FSP20)*. As a response to this direction, Air Force released *The Air Force Strategy* (AFSTRAT) which seeks to incorporate the government direction and make it operative for the Air Force as the domain leader for air and space.

In order to successfully design the future force, Air Force requires a concept and vision for its anticipated future through a strategic design lens. Once a goal has been established, we can shape the narrative and design process for air and space power to meet the needs of the joint force.

AFSTRAT provides the strategic tools for Air Force to intelligently position itself for the future, while making best use of its current capabilities. The *Air Force Operating Concept* (to be issued) is designed to identify the 'work' of Air Force across all three temporal epochs (Force-in-Being, Planned Force, Future Force). These two documents represent the core of what Air Force does for the joint force in the air and space domains.

This document (HACSTRAT) represents the tool by which Air Force will identify, understand and exploit the future environment, and thus appropriately shape capability acquisition and sustainment for the future Air Force.

THE FUTURE FORCE



AIR FORCE'S SECOND CENTURY WILL BE CHARACTERISED BY SIGNIFICANT INCREASES IN COMPUTATIONAL POWER, ADVANCED MANUFACTURING, MINIATURISATION, SOPHISTICATED SENSORS, ENHANCED ACCESS TO SPACE AND ARTIFICIAL INTELLIGENCE.

Combined with more sophisticated cyber challenges, changing geostrategic circumstances and global power shifts, this century will have incredibly high tech, fast moving and complex battlespaces.

Air Force's contribution to the joint force will become less about 'things with wings', and more about realising the unsurpassed advantage of the ultimate high ground – the air and space domains.

The force of tomorrow will be characterised by invisible connections across air, land, maritime, space, information and cyber – with masses of data from sensor inputs fused with artificial intelligence and machine learning - to rapidly convert data to information to knowledge, and to insight at unfathomable speeds.

The entire Defence Force will be one integrated system of systems. We need to move beyond platform-centric thinking. Our competitive advantage will be in how we use creative and non-prescriptive compositions of capabilities across the ADF to achieve effects. This will be driven by the creativity and ingenuity of our people, and the agility and integration of our systems.

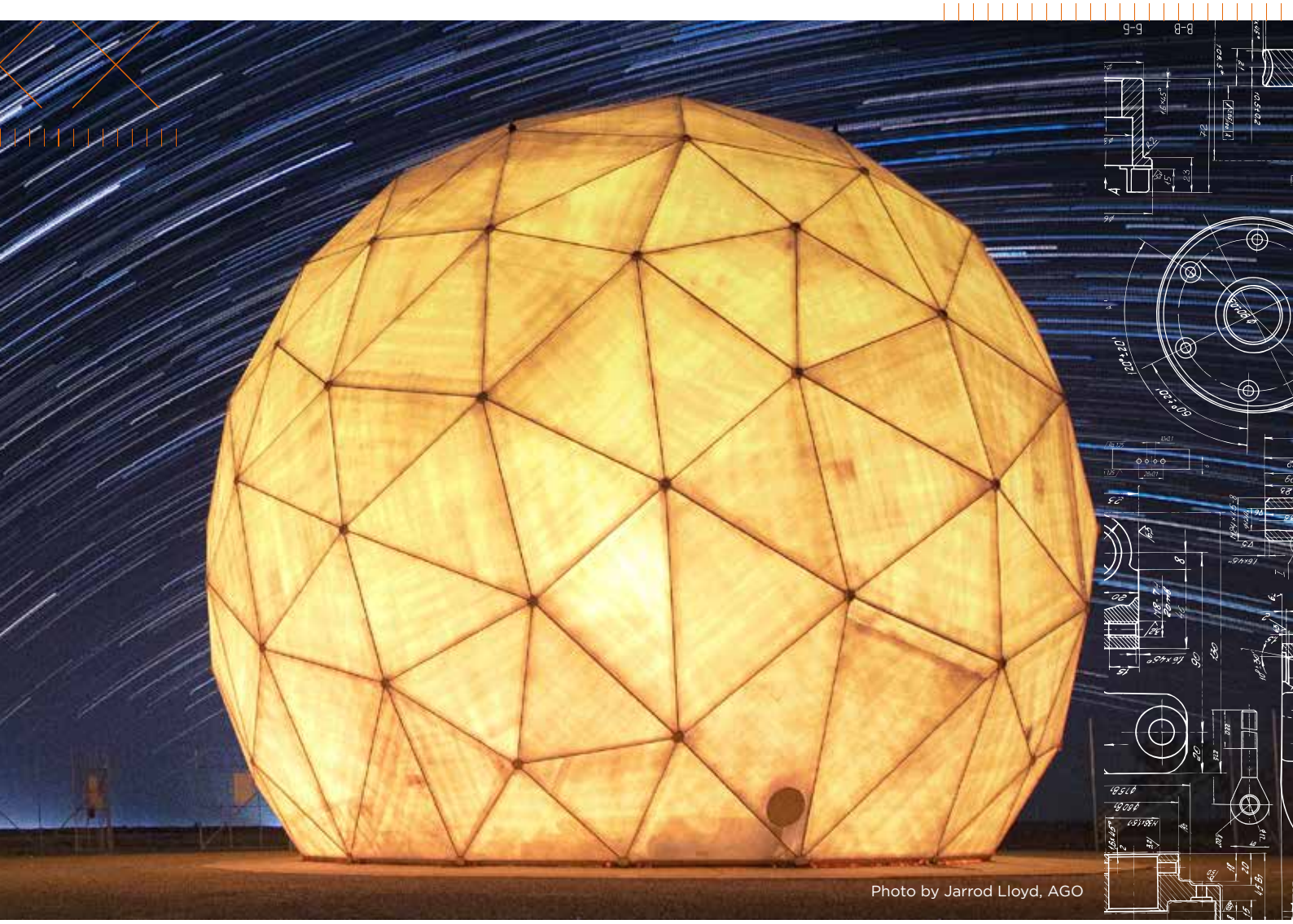


Photo by Jarrod Lloyd, AGO

The joint force will be artificial intelligence (AI) enabled, using robotics to augment human roles. AI will proliferate across all areas of Air Force, including force generation and sustainment, relying on trusted human/machine relationships to optimise performance. For example, the use of AI and automation to conduct and optimise repetitive, time-consuming administrative and logistics activities will allow people to focus on higher value, more creative tasks.

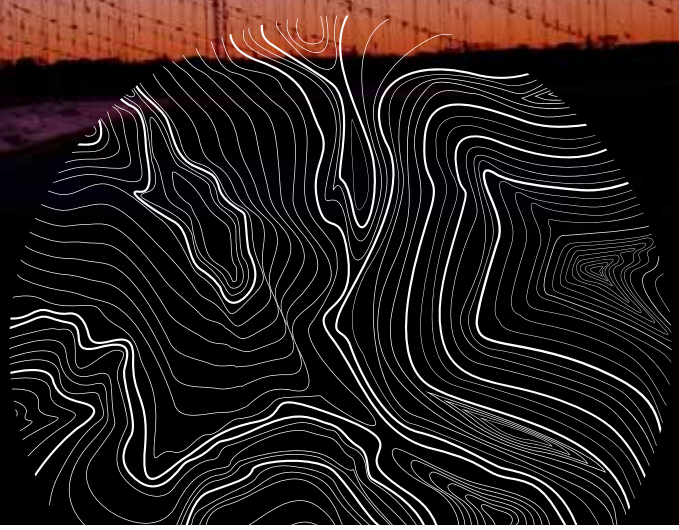
Our high-value crewed systems will be force-multiplied by layers of robotic and autonomous systems. We will see increased mass and miniaturisation – supplementing large, expensive platforms with smart, small and many lower cost capabilities. For example, drones, expendable sensors and other commercially available technology. Our air and space power capabilities won't be reliant on air bases and large fixed infrastructure.

Most aircraft will be remotely or autonomously piloted; hypersonics will help us reach further faster; bases will be agile and resilient; training will be virtual; and space will become increasingly pivotal.

Air Force is leading an exciting new era in Defence space, which will support our operations across the air, land, maritime, information and cyber domains.

Traditional capability procurement models will not provide the creative and innovative outcomes we require. We need to imagine, create, collaborate and innovate. We need to develop our sovereign industry – effectively growing and leveraging Australia's defence industry and innovation capabilities as a fundamental input to air and space power for our future force. HACSTRAT provides the framework for a contemporary approach to deliver agile and creative air and space capability.

AIR AND SPACE CAPABILITY DIVISION



In recognition of the significant changes needed to position Air Force for the future in a fast paced and rapidly changing environment, a new position was established in Air Force Headquarters in 2019.

The Head of Air Force Capability (HAC) reports directly to the Chief of Air Force. HAC is responsible for imagining, designing and shaping the needs and requirements of air and space power for the joint force - now and into the future.

HAC leads the Air and Space Capability Division using a contemporary, agile and collaborative approach to capability development. The Division has the remit to redesign Air Force's approach to capability; breaking mindsets and models, and developing the deep engagements and force structure necessary to achieve the best air and space power effects.

AIR AND SPACE CAPABILITY VISION

TO RAPIDLY DELIVER AGILE AND CREATIVE AIR AND SPACE CAPABILITIES, INTEGRATED INTO THE JOINT FORCE TO ADVANCE AUSTRALIA'S SECURITY AND PROSPERITY.

HOW WE WILL ACHIEVE OUR VISION

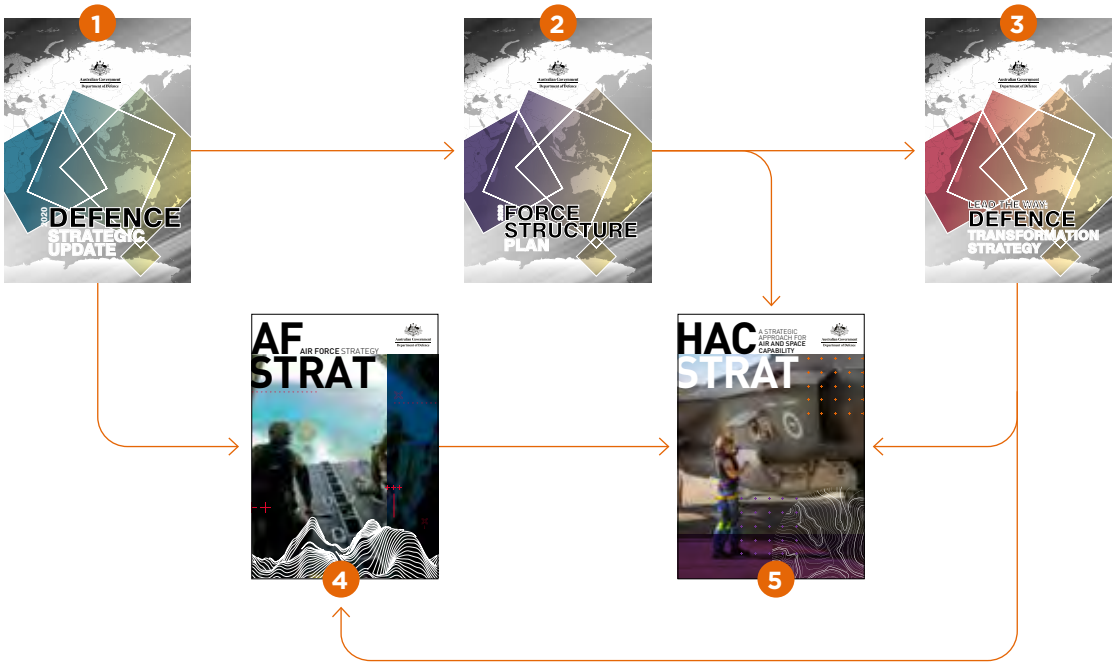
WE WILL IMAGINE, ANALYSE AND INVEST IN OUR FUTURE CAPABILITY BY HARNESSING THE EXCELLENCE OF OUR PEOPLE, PARTNERS, AND THE LATEST TECHNOLOGY TO COLLABORATE, CREATE AND DELIVER FAST.

HACSTRAT GOLDEN THREAD APPROACH

HACSTRAT takes a golden thread approach from the Strategic Update, Force Structure Plan, Defence Transformation Strategy and AFSTRAT. It describes specific initiatives under three lines of effort that will deliver agile and creative air and space capability as relevant to:

- The capability components of **AFSTRAT**
- The Air and Space capability elements of the **FSP20**
- Drive Improved Capability Delivery (initiative 3.1) and Strengthen Defence's approach to Australian Industry Capability (initiative 3.2) of the **Defence Transformation Strategy**.

FIGURE 1: THE GOLDEN THREAD APPROACH



HORIZONTAL INTEGRATION & FUNCTIONAL RELATIONSHIPS

AFSTRAT introduces the concept of horizontal integration to minimize the focus on platforms and enhance focus on the strategic outcomes.

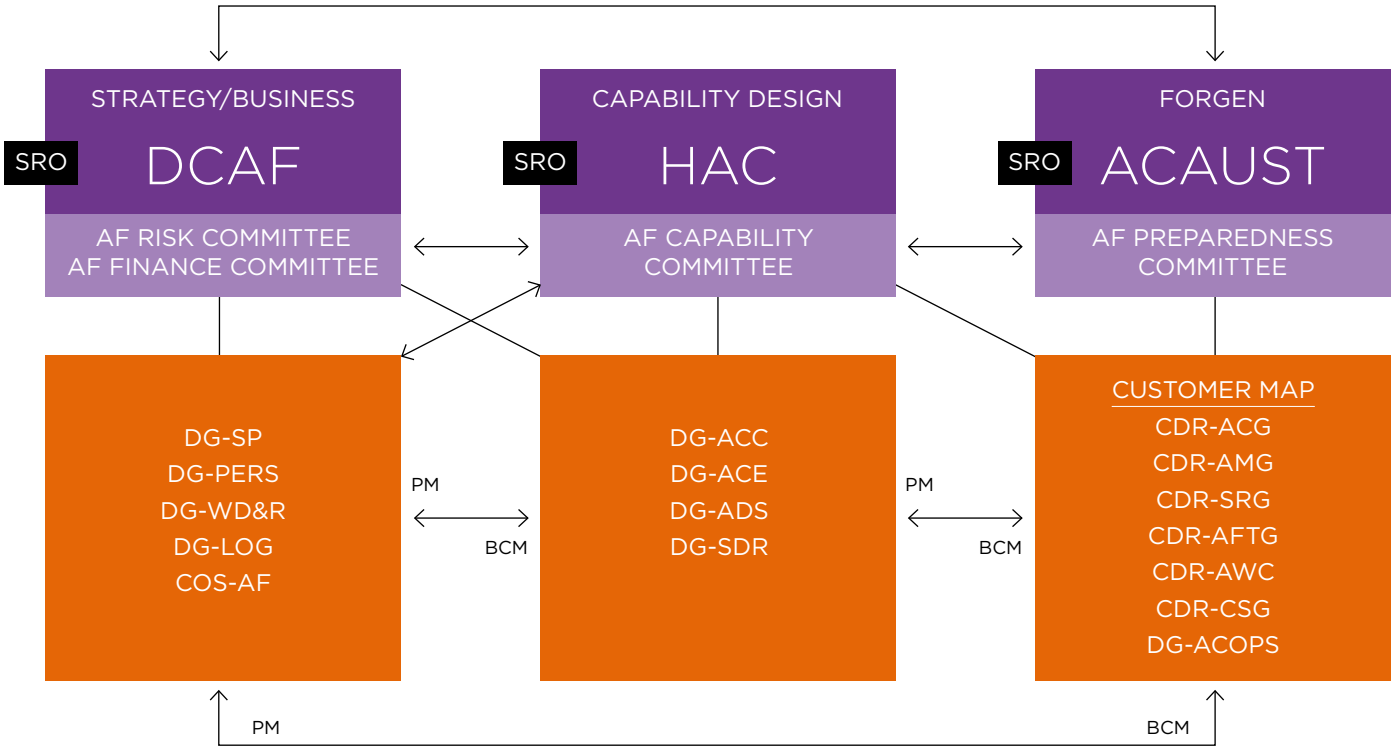
HACSTRAT embraces a matrix approach to deliver air and space power effects for the joint force. To maximise outcomes and minimise duplication, functional relationships across Air Force capability have been mapped in Figure 2.

Through HACSTRAT we will work to ensure the current and future capability needs for air and space power are understood, anticipated and met. Our key enabler is DCAF in terms of strategy and policy, workforce, personnel and culture, and logistics. Our most significant customers are ACAUST and the joint force.

We need to understand our end-user's current and future needs, challenges, and ideas so that we can best meet their capability requirements – now and into the future. Decisions made for the force-in-being also impact future force planning. Closer integration between the Air and Space Capability Division, the Force Element Groups (FEG) and Air Warfare Centre is essential to bring together a deeper understanding of operational circumstances together with enriched capability planning.

HACSTRAT works across the temporal horizon continuum, ensuring air and space capability needs are met from the force-in-being, through to the planned force and future force.

FIGURE 2: AIR AND SPACE CAPABILITY FUNCTIONAL RELATIONSHIPS



Terms from Managing Successful Programs Delivery Framework:
SRO – Senior Responsible Owner
PM – Program Manager
BCM – Business Change Manager

CHAPTER 2 HACSTRAT LINES OF EFFORT

Three lines of effort (LOE) have been defined to achieve the Air and Space Capability vision: To rapidly deliver agile and creative air and space capabilities, integrated into the joint force to advance Australia's security and prosperity.

These lines of effort nest under AFSTRAT's five lines of effort, with a specific capability and future force focus.

1. DEVELOP AIR AND SPACE POWER FOR THE FUTURE FORCE

(AF LOE: 1, 3, 5)

2. AGILE CREATIVE EFFECTS FOR TRANSIENT ADVANTAGE

(AF LOE: 1, 4, 5)

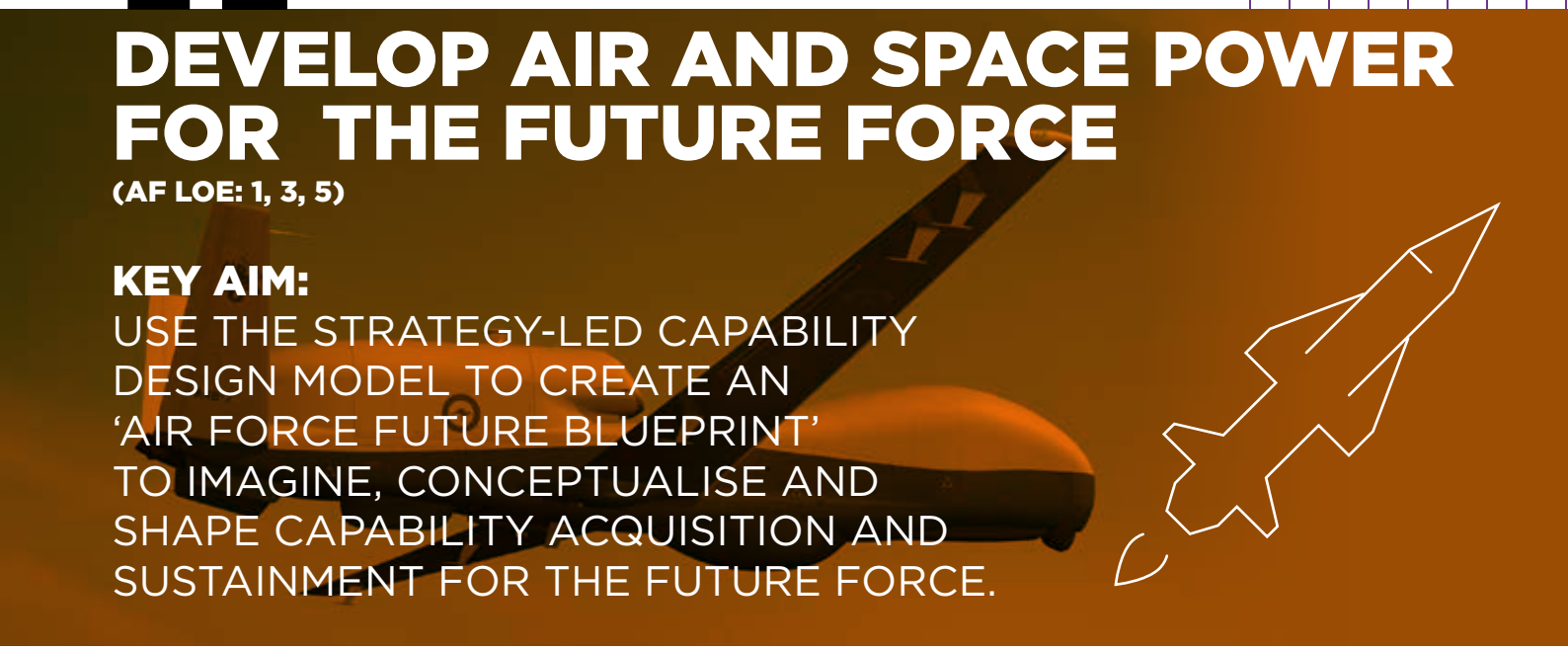
3. CONCEIVE FUTURE WORKFORCE

(AF LOE: 2, 4)

1.

DEVELOP AIR AND SPACE POWER FOR THE FUTURE FORCE

(AF LOE: 1, 3, 5)



KEY AIM:
USE THE STRATEGY-LED CAPABILITY DESIGN MODEL TO CREATE AN 'AIR FORCE FUTURE BLUEPRINT' TO IMAGINE, CONCEPTUALISE AND SHAPE CAPABILITY ACQUISITION AND SUSTAINMENT FOR THE FUTURE FORCE.

Air Force is delivering capability as outlined in the FSP; however, it isn't *designing* the objective or future force. In order to deliver a successful future force, Air Force must design what that force needs to be capable of doing, what capabilities that force will have, and how it will integrate with itself, the joint force and allies and partners (in accordance with Plan Aurora); rather than just deliver a disparate range of projects.

Air Force may not always be the lead organisation in defining the desired future; however, it is the joint force lead for the air and space domains. In that role, Air Force must be actively involved in shaping and defining the ADF desired future, to ensure the effective delivery of air and space power as part of the joint force.

This line of effort seeks to identify and understand the future environment and thus appropriately shape capability acquisition and sustainment for the future Air Force.

AIR AND SPACE POWER BLUEPRINT

An Air and Space Power Blueprint will be a key tool to articulate the future through a capability lens. The Blueprint will:

- Provide an outline of a force that is fit-for-purpose, resource aware and tested to best meet strategic guidance and our desired future.
- Be considerate of the strategic landscape and over-arching direction, available resources and technology, appetite for risk and the capacity of Australian industry.
- Have been tested, contested and refined before it is input to the Defence Capability Assessment Program (DCAP) cycle for consideration by the joint force.

There are three main precursors to developing an Air and Space Power Blueprint:

1. A set of design principles that will underpin future capability decision making.
2. A comprehensive and responsive visualisation tool that will deliver a clear concept of the future force to help imagine, conceptualise and shape capability, and enable informed and intelligent planning across Air Force.
3. A Strategy-Led Capability Design Model to transform the way that air and space capability is delivered. This Model is described on page 25. It includes a significant focus on modelling and experimentation, and multi-level red teaming.

PARTNERSHIPS AND ENGAGEMENTS

As a potent Air Force our relationships are pivotal to delivering air and space power in a dynamic and challenging strategic environment. Relationships and collaborations are a distinct element in our competitive advantage.

Australia needs to rapidly develop capabilities that sharpen our competitive edge and we can't do it alone. The only way we can effectively leverage our partners' expertise into the very best capability for Australia's national security is by working closely with Defence, industry and international partners.

INTERNAL ENGAGEMENT

Internally, the matrix approach set out in AFSTRAT needs to be systematised into our capability approach to align future force vision and capability needs for air and space power for the joint force. The Air and Space Capability Division is a newly established one, and a concerted effort is required to establish functional relationships and an integrated capability approach across Air Force and with the joint force. To this end, HACSTRAT will:

- Build internal engagement and awareness around a bold and quantifiable vision and Air and Space Power Blueprint.
- Build trust, create clear processes, and work to prevent duplication of force-in-being capability developed through direct engagement with Air Command.
- Improve FEG engagement through Air Force Capability processes and stronger links between the FEGs and Air and Space Capability branches.
- Ensure cross-representation into land, maritime and cyber domain senior committees to share capability inter-operability ideas.

INDUSTRY ENGAGEMENT

The DSU20 talks of a cultural shift to a genuine partnership between Defence and industry.

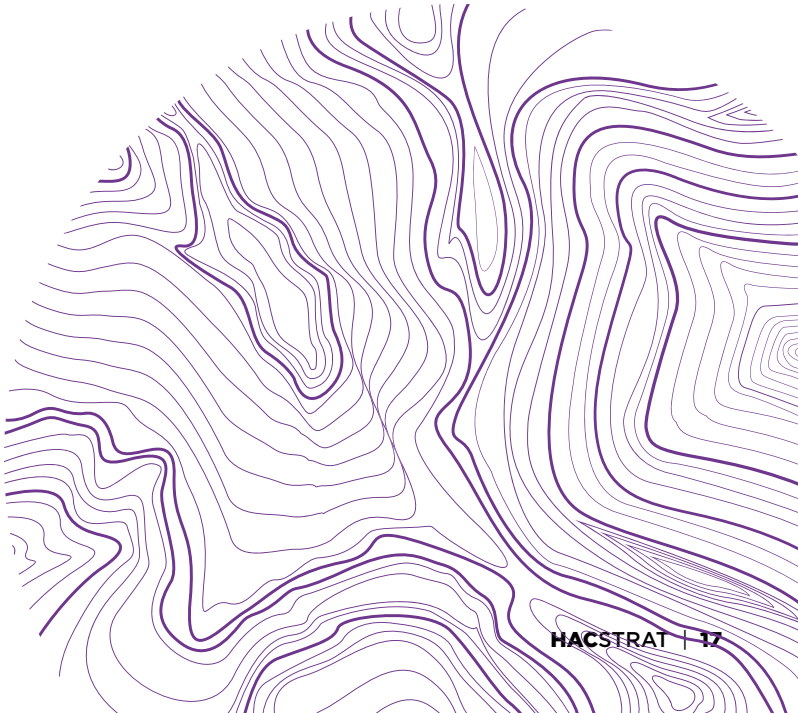
To maintain our advantage in a very fast moving and contested space, we need to bring in the minds of industry earlier and work together in a much more agile way. Through programs like Integrated Air and Missile Defence System, and projects such as Loyal Wingman, M2 CubeSat, and the Jericho Smart Sensing Lab, the Air and Space Capability Division has been prototyping approaches to a continual capability development cycle. These approaches, each unique, involve starting early; iterating often; and sharing learnings as we go.

We will use these learnings to redefine our industry engagement model to work more closely with Australian industry, including embedding an agile capability development approach.

INTERNATIONAL ENGAGEMENT

DCAF is responsible for the development and implementation of the Air Force International Engagement Plan (AFIEP) that contains specific guidance relating to Air Force's international relationships. Other relationships with international allies, partners and industry are integral to Air Force's capability and must be managed in concert with the AFIEP.

Under HACSTRAT, we will develop robust international partner engagement plans as an integrated part of capability program management. This will be done in accordance with the AFIEP.



2.

AGILE CREATIVE EFFECTS FOR TRANSIENT ADVANTAGE

(AF LOE: 1, 4, 5)

KEY AIM:
ENSURING THAT NOVELTY AND CREATIVITY ARE CENTRAL CHARACTERISTICS OF OUR FORCE DESIGN – ENABLING AIR AND SPACE POWER TO BE APPLIED IN WAYS THAT CANNOT EASILY BE ANTICIPATED BY COMPETITORS.

There are great merits in being an extremely structured, logical, high-quality organisation. But we will only prevail in a future that we design, create and enable. To do this, we need to imagine more.

Our competitors are highly technical, highly adaptive, and are moving so quickly that any advantage we have will be transient or fleeting. It might only be few seconds before our competitors respond with something else. Air Force must continuously find and exploit asymmetries to prevail in an environment of constant competition.

We need to challenge our thinking about sustaining a capability edge. It is not enough to have a few advantages or exquisite platforms. We need to have a system of advantages across the joint force that we can use at any time to defeat the enemy. Our competitive advantage will be in how we use creative and non-prescriptive compositions of capabilities to achieve effects. Disruptive technologies are going to be increasingly important; as are sovereign capabilities.

This line of effort is our commitment to ensuring that novelty and creativity are central characteristics of our force design – enabling air and space power asymmetries to be exploited in ways that cannot easily be anticipated by competitors or adversaries.

We need to enable creative and non-prescriptive compositions of platforms, capabilities and priorities to address complex grey-zone threats. We will only succeed if our people and systems are agile enough to adapt faster than our competitors.

We will:

- **Embrace fast failing and rapid prototyping** in collaboration with industry and academia to bring disruptive capability to Air Force through:
  - Major capital investments to include novel or disruptive concepts, prototypes and inventions that may result in a step-change in capability effects.
  - Jericho's Disruptive Innovation program to inform future force thinking, facilitate experimentation, and test concepts and ideas with partners on priority Air Force and joint force risks and issues. Jericho will engage with capability sponsors to develop a scope of work that addresses capability gaps, risks, issues and opportunities.
  - Jericho's Edgy Air Force (AF) program for bottom-up innovators to uplift, upskill and challenge our people to creatively design and rapidly prototype next generation solutions to today's problems.
  - Working with PERSBR-AF to reward strategic, innovative & creative behaviours and tag people with innovative and a creative aptitude for innovation roles.
- **Embed behaviours that nurture experimentation and encourage rapid capability development by:**
  - Identifying phases in the capability process to accept a higher level of risk, and require experimentation, prototyping with industry and red-teaming.
  - Building these behaviours into the process by modifying process requirements.
  - Encouraging critical thinking and bold decision making to modify or discontinue initiatives that are not expected to deliver required outcomes.
- **Leverage existing Defence programs** to develop relationships with Australian industry to drive innovation and future capability development. The Air and Space Capability Division will initiate strategic and proactive engagement with the Defence Innovation Hub, Australian Industry Capability Program, Next Generation Technologies Fund, CASG, DSTG and other programs to:
  - Develop challenge statements to tackle specific future capability sets
  - Engage closer with Australian industry through industry days, innovation festivals, forums and other methods.
- **Engage in future thinking and conceptualisation** through the Air and Space Power Centre in partnership with DSTG, academia and industry. Our approach will feed into the blueprint process and will use red teaming to test assumptions and comprehension.

"LOGIC WILL GET YOU FROM A TO B. IMAGINATION WILL TAKE YOU EVERYWHERE."
– ALBERT EINSTEIN

3.

CONCEIVE FUTURE WORKFORCE

(AF LOE: 2, 4)

KEY AIM:
TO CONCEPTUALISE THE FUTURE WORKFORCE REQUIREMENTS TO REALISE THE 'AIR AND SPACE POWER BLUEPRINT' AND TO DRIVE CREATIVITY AND AGILITY ACROSS ALL LEVELS OF THE FORCE.

Our future force will be powered by the talent of our people with the right skills, in the right environments, within a supportive culture. This line of effort is about planning for the workforce requirements for the Air and Space Power Blueprint, and enabling creativity and agility across all levels of the force.

In defining our future workforce needs, we need to take into account the lead times for emergent capabilities. We also need to understand that the workforce of tomorrow will be digital natives and have a more intuitive connection with technology. It is important to develop an understanding of trusted human/machine relationships, and carefully consider the use of AI and robotics to augment or replace legacy roles, as AI and automation proliferates across Air Force.

We need to establish recruitment and development pathways for non-traditional Air Force roles such as programming, data analysis, creative dilemmas, and training robots and AI. Sustainable Air Force innovation requires an intelligent and skilled community who demonstrate agility, creativity and innovation at every level in our workforce – and extended community.

AFSTRAT establishes that DCAF, in consultation with ACAUST through DGWD&R-AF and DGPERS-AF, is to develop and maintain a workforce design process that provides sufficient human capital to meet organisational and operational requirements. Likewise, HAC, in consultation with DGPERS-AF and DGWD&R-AF, is to define future workforce needs, taking into account the lead times for emergent capabilities.

The Air and Space Power Blueprint will help define future workforce needs. A long lead-time workforce model will result in skillsets that are out of date by the time they are delivered. Transitioning to the required future workforce requires significant redesigning, reshaping, reskilling, and re-educating to meet planned and emergent needs, and deliver a more agile approach to skillsets and career pathways.

We will:

- **Ensure Air Force is recruiting the right skills for the future** by supporting the development of an organisational construct that aligns to the future force capabilities by working with DG-PERS and DG-WD&R to:
  - Use the Future Force Visualisation (LOE 1) to develop the future workforce design requirements; considering lead time for emergent capabilities.
  - Support the attraction, development and retention of the best talent for the future through agile career pathways with industry and academia leveraging the Total Workforce Model.
  - Develop formal recognition and career pathways to encourage strategic thinking, innovation and creativity.
- **Drive training and education to meet current and future capability needs** by having:
  - DGWD&R-AF evaluate, adjust and develop an agile training model for the current and future force (e.g. just-in-time training).
  - DGWD&R-AF utilise advanced, modern training tools and methodologies to develop training now and into the future.
  - Jericho evaluate innovative training paradigms for future capabilities.
- **Use innovative and creative techniques to increase the STEM pipeline** for future talent by:
  - Investing in Jasper and Jarli as STEM engagement tools for young people to increase the Australian talent pool for the future.
  - Engaging with Defence People Group (DPG) and Defence Science and Technology Group (DSTG) as the STEM lead for sustainment.
  - DGWD&R-AF ensuring the various Air Force STEM engagements cover targeted age ranges.

CHAPTER 3
CAPABILITY DESIGN FRAMEWORK

Two main tools will be used to transform the way air and space capability is delivered:

1. A SET OF DESIGN PRINCIPLES THAT WILL UNDERPIN FUTURE CAPABILITY DECISION MAKING.

2. A STRATEGY-LED CAPABILITY DESIGN MODEL WITH A SIGNIFICANT FOCUS ON MODELLING, EXPERIMENTATION AND MULTI-LEVEL RED TEAMING.

Difficult resource decisions and dilemmas will be considered using these tools within the paradigm of the Air and Space Power Blueprint.

AIR AND SPACE POWER FUTURE FORCE DESIGN PRINCIPLES

"IF WE 'STATUS QUO' OUR WAY TO THE FUTURE WE WILL FAIL"
– AIRCDRE PHIL GORDON

These design principles are deliberately disruptive to jolt Air Force out of our comfort zone and create incentives to make the hard decisions that will be necessary to deliver the future force.

The intent is to apply these principles across air and space capability programs wherever possible, shaping and optimising the future force with an understanding that meaningful change will take time and continued deliberate focus. All Air Force Capability Committee (AFCC) proposals and capability submissions will be critically assessed against these principles, thereby rewarding and reinforcing the desired behaviours.

Please refer to the classified annex for more details on design principles.

STRATEGY-LED CAPABILITY DESIGN MODEL

An intelligence-informed Strategy-Led Capability Design Model has been designed to deliver air and space power for the joint force in a strategic, holistic, integrated and adaptive way.

The aim point is an Air and Space Power Blueprint which feeds into the DCAP cycle for consideration of its solutions, and is actioned through the Air Force Capability Committee which governs the execution of the Model's outputs. The Model is a loop system. The Blueprint is not static, it will continue to adapt to meet the joint force's capability needs at the speed of relevance.

The Model is temporally agnostic – in that it can be applied to the development of both the objective force and the future force.

HOW THE STRATEGY-LED CAPABILITY DESIGN MODEL WORKS

At the macro level, the Model is nested under and guided by strategic direction from government and the broader Department of Defence. It incorporates the direction from joint concepts and future thinking, and in-turn informs multi-domain thinking.

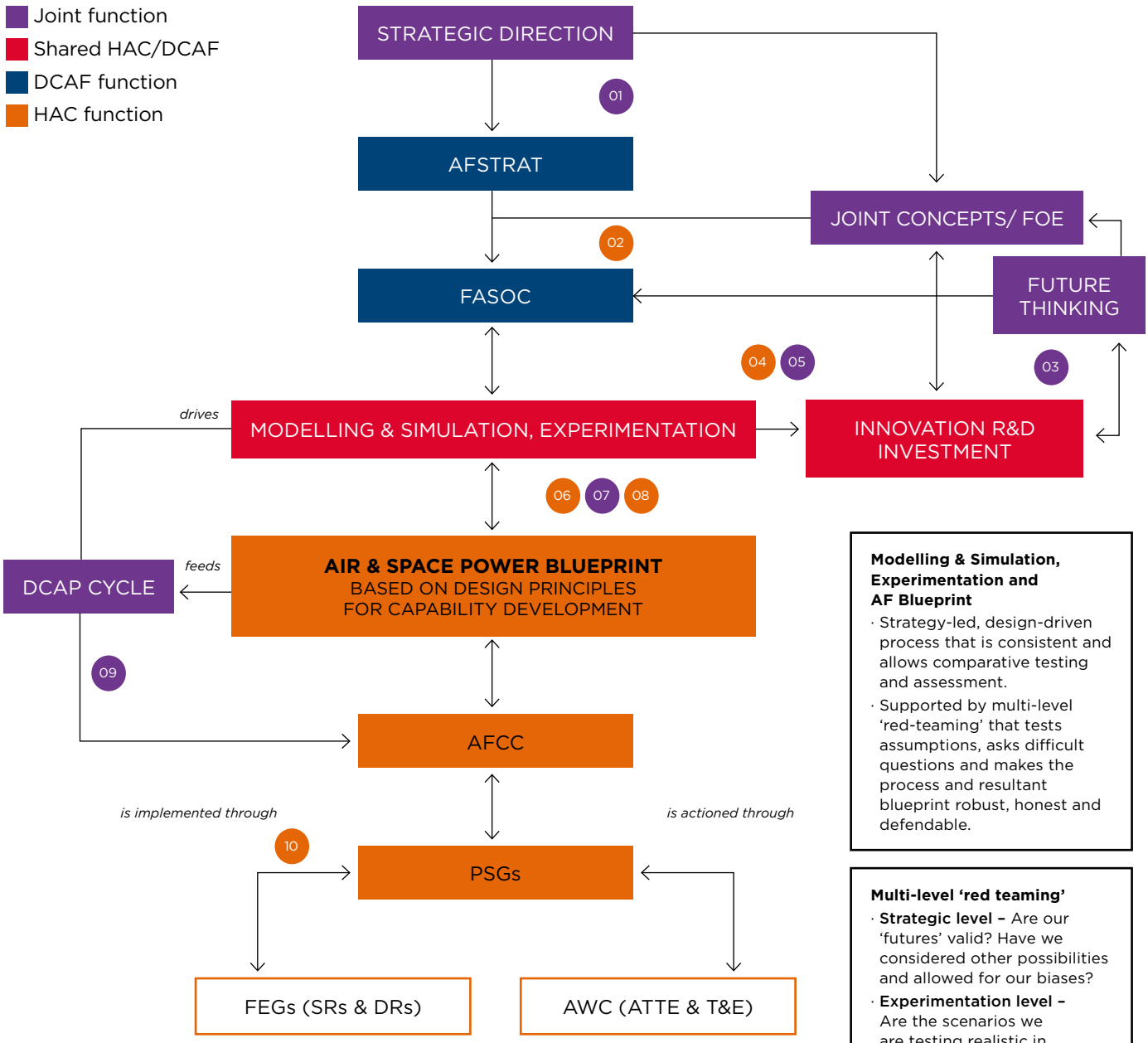
The Model is a loop system - where outputs are fed back into the process to improve future modelling and decision making. In order to ensure the Model and the process are transparent and defendable to scrutiny, responsibility for different aspects of the Model is led by different areas of Air Force. This separation of responsibility assures independence throughout the process, avoids group think and holds both the process and its output to account for answering the questions being asked of it. Specifically, the responsibility for the doctrinal base, strategy and red teaming/contestability of the Model is separate from the responsibility for the generation of the capability proposals.

The Model embeds red teaming, making it a habitual and bringing a breadth of people and diversity of thought into the process. The design principles shape capability decisions to leverage new concepts, ideas and technologies.

The main output of the Model is an Air & Space Power Blueprint.

The Blueprint development is an ongoing process that informs AFCC considerations and supports DCAP updates. The Blueprint is a living, breathing, constantly adapting database of what is currently agreed and funded, and the rationale for it.

FIGURE 3: AIR FORCE STRATEGY LED CAPABILITY DESIGN MODEL



Modelling & Simulation, Experimentation and AF Blueprint

- Strategy-led, design-driven process that is consistent and allows comparative testing and assessment.
- Supported by multi-level 'red-teaming' that tests assumptions, asks difficult questions and makes the process and resultant blueprint robust, honest and defendable.

Multi-level 'red teaming'

- **Strategic level –** Are our 'futures' valid? Have we considered other possibilities and allowed for our biases?
- **Experimentation level –** Are the scenarios we are testing realistic in complexity? Do they allow valid testing or are they designed to produce a specific outcome? Are they being conducted at the right classification? Have we considered red and blue?
- **Capability design –** Are we prioritising our capability effort correctly?

The 10 step process outlined on the following page describes the Model in more detail.

10 STEPS

TO DEVELOPING A CONTINUOUS AIR & SPACE POWER BLUEPRINT

01

Strategic direction as provided by Government, the joint force and AFSTRAT is the **fundamental input** into the system.

02

Joint concepts, doctrine and the futures are input into the system, with a revived **Future Air and Space Operating Concept** (FASOC).

03

Industry, DSTG and Academia also provide input into this part of the Model through their **future thinking, experimentation, technology demonstrators, R&D, and innovative concepts** and ideas.

04

These inputs, together with the design principles and Air Force Concepts Framework will lead to **air and space power concepts** (operating concepts, CONEMPs, CONOPs) being developed to a standard and controlled input. This will then allow for robust and comparative modelling, simulation and experimentation to take place.

05

This experimentation will be thoroughly 'red teamed'. **Red Teaming Round 1** will cover aspects ranging from:

- Are the outlined futures valid?
- Have alternate possibilities been considered to allow for institutional biases?
- Are the scenarios used nested under strategic guidance?
- Have the design principles been applied?
- Are they realistic in complexity?
- Are they being conducted at the right security level?
- Have the risk assessments and assumptions been tested?
- Are the right capabilities being prioritised?

06

Once a potential capability has **passed through the experimentation process** and the strategic guidance part of the Model, it can be moved into the Blueprint for further and force-wide consideration.

Image courtesy of TASDCRC

07

At the Blueprint level, the potential capabilities are considered from a service level perspective. The various capabilities are all put into an Air and Space Power Blueprint and then the constraints applied against them all as a collective group. This is to ensure that the finite available resources are apportioned appropriately, and the final product is able to be resourced and delivered.

08

Red Teaming Round 2 is applied at this point, where it will focus on the viability, capability and sustainability of the force as a whole. Covering areas such as:

- Does it have the people it requires?
- Is there sufficient workforce for the blueprint?
- Can it be trained and sustained?
- Are the timelines appropriate?
- Does it contain 'force limiting' capabilities that are in demand across the force?
- What limitations are there on the force as a whole?
- Can single points of failure and weaknesses be found?

09

A robust and defendable Air and Space Capability Blueprint is presented to the DCAP process for consideration by the joint force, and any refinements are made. **The approved Blueprint is actioned through the Air Force Capability Committee** that governs the execution of the Model's outputs and iterations.

10

The Blueprint is a living, breathing, iterating, agile loop. Once the output has been accepted into the DCAP, then the outcome of those decisions is fed back into the system and it can recommence from the new baseline for the next iteration.

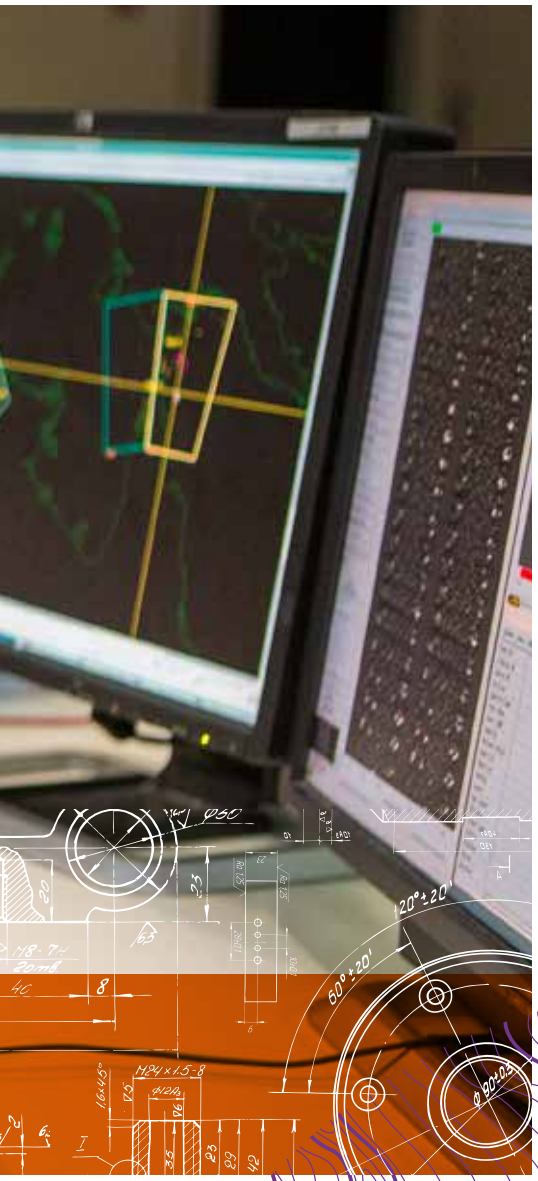
CONTINUOUS IMPROVEMENT

The DSU20 identified continuous transformation within Defence is essential to implementing the government's objectives, and building Defence's capacity to anticipate and respond to a more uncertain external environment.

Because the system has been designed as a **loop system**, it will keep iterating, starting from the DCAP approved baseline for the next iteration. This gives a clear base to begin again and for future results to be compared against the previous version, because the process is open and repeatable.

The Strategy-Led Capability Design Model embeds a more contemporary, agile approach to capability development, that brings in partners earlier and closer, and empowers our people to engage with capability differently. Developing a pool of red teamers from across the joint force at all ranks and employment groups, from tactical to strategic functions, will bring in a diversity of thought and grow critical thinking across our force.

As Air Force continues to transform, we must reshape and upskill our workforce to transition into more complex capabilities and platforms.



VISION WITH ACTION MAKING THIS HAPPEN

HACSTRAT is a conscious, deliberate, and strategic approach to manage capability differently. We have made a choice to jolt ourselves out of our comfort zone, and to make the hard decisions that are necessary to shape and optimise the future force.

HACSTRAT is both a mindset and a systematic approach that will be embedded across all capability program management and project plans. The Strategy-Led Capability Design Model provides the framework to think about capability in a strategic, holistic, integrated, and adaptive way. All AFCC proposals and capability submissions will be critically assessed against the Model elements and design principles. Difficult resource decisions and dilemmas will be considered using these tools within the paradigm of the Air and Space Power Blueprint.

There will be challenges, there will be risks, there will be barriers. These will be overcome with a laser-sharp focus on how to best deliver the air and space power needs of the joint force at the speed of relevance. Our future depends on it.

AIR FORCE

AIR & SPACE CAPABILITY

Image courtesy of UNSW Canberra Space