Australian Government
Defence

Defence Data Strategy 2.0

DECISION ADVANTAGE IN THE DATA AGE

To defend Australia and its national interests in order to advance Australia's security and prosperity

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Acknowledgement of Country

Defence acknowledges the Traditional Custodians of Country throughout Australia. Defence recognises their continuing connection to traditional lands and waters and would like to pay respect to their Elders both past and present. Defence would also like to pay respect to the Aboriginal and Torres Strait Islander peoples who have contributed to the defence of Australia in times of peace and war.

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Contents

Foreword by the Associate Secretary

Data is a strategic asset that has the potential to transform Defence, increase preparedness, and enhance the effects of our capabilities. However, Defence is yet to realise the full potential of this strategic asset.

The Defence Data Strategy 2021-2023 provided foundational data management practices, guided by the Driving Principles of Govern, Trust, Share, Discover and Use. Defence Data Strategy 2.0 builds on these foundations and responds to the challenges identified within the 2024 National Defence Strategy. It identifies the actions that Defence must take to accelerate and unlock the potential of data, and strengthen the capabilities of the integrated, focused force.

This Strategy applies across the spectrum of warfighting and corporate data. Warfighting data includes mission data, targeting data, intelligence mission data, geospatial data and intelligence, surveillance and reconnaissance data. Corporate data includes financial, human resource, logistics, engineering, maintenance, estate data and more. Corporate data is often critical to operational effects.

This strategy unites a range of activities for Defence to realise enhanced decision advantage as one of six capability effects required by the 2024 National Defence Strategy. Enhanced decision advantage will allow Defence to achieve mission success in contested and hostile environments, potentially including major conflict.

Success can only be achieved through careful coordination and alignment of efforts across the enterprise. Defence's resources are finite and it no longer has the luxury of time. Data will allow Defence to deliver more capability from our resource allocation, and make better decisions faster.

Defence Data Strategy 2.0 is to be read alongside the Defence Digital Strategy. Both strategies recognise that our data and digital platforms are strategic assets that are critical to our warfighting capabilities, improving our corporate and enabling services, and optimising the use of Defence resources.

Matt Yannopoulos PSM

Associate Secretary of the Department of Defence

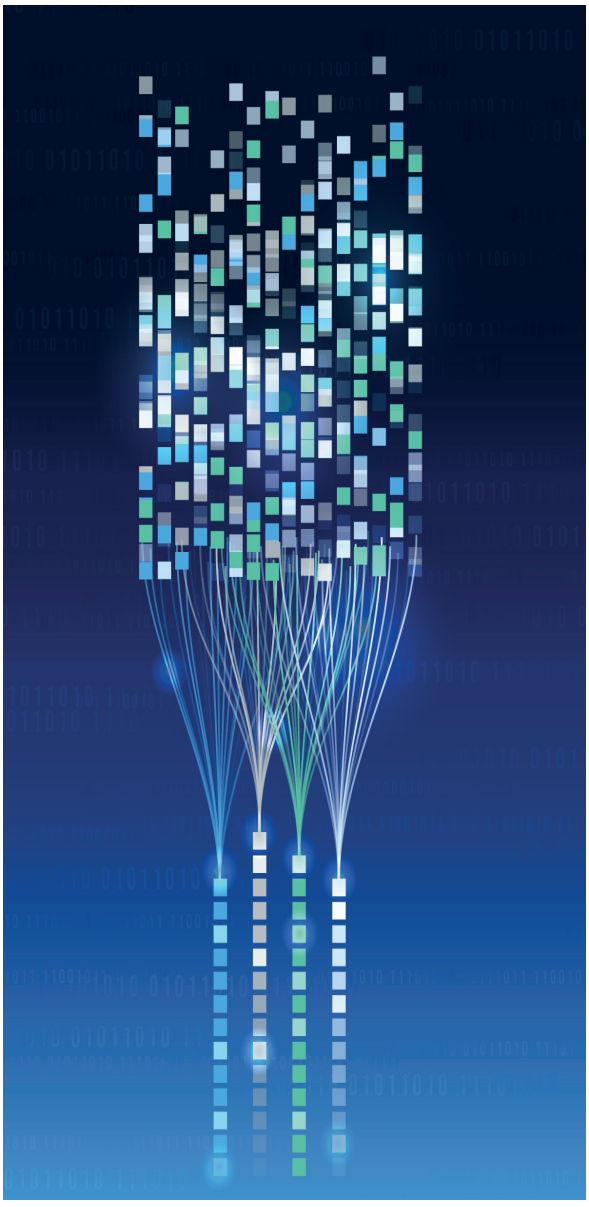
Decision advantage in the data age

The 2024 National Defence Strategy requires Defence to achieve decision advantage as one of six capability effects.

Decision advantage is the ability to make better decisions, faster than any potential adversary. Data is a strategic asset for Defence that is essential to realising enhanced decision advantage. Integrating data from across the spectrum of warfighting and corporate functions will allow Defence to develop more accurate insights and a better understanding of our operating environments and risks.

Decision making in crucial areas like planning, capability investment and sustainment will be strengthened through effective data management, and enhanced decision support, analysis and reporting capabilities.

The ability to more rapidly access, search and use Defence's vast volumes of data will enable decision advantage. This is critical in an increasingly complex multi-domain operating environment.



"Decision advantage is the ability to make better decisions, faster than any potential adversary"

DATA: AN ENTIRELY FUNDAMENTAL INPUT TO CAPABILITY

As Defence becomes increasingly connected and digitally enabled, the role of data will take on greater emphasis. Under this strategy, the integrated, focused force will be data centric by design and in operation. The integrated, focused force will access and consume trusted, reliable and resilient data at unprecedented speed and scale to generate critical capability effects, including decision advantage.

Establishing data as its own fundamental input to capability within the One Defence Capability System will drive better outcomes for the integrated, focused force. The design and development of capabilities will consider data requirements from the outset.

With data as its own fundamental input to capability in the One Defence Capability System, Defence will:

- enhance the effects of capabilities of the integrated, focused force by incorporating data requirements, standards and interoperability from the commencement of capability
- make data accessible at the right time and the right place for desired operational or strategic effect
- enhance the ability to assess and manage the investment in data within the 2024 Integrated Investment Program to achieve strategic priorities
- enhance the understanding and management of data generated by new and advanced capabilities delivered through the 2024 Integrated Investment Program.

The value of data as a strategic asset will be enhanced by considering data as a fundamental input to capability. Strategic decisions can be made on what data Defence needs, how it is used and importantly, how it is managed.

Programs such as the OneDefence Data Platform are designed to enhance decision support, data integration and data analytics. Having data as a fundamental input to capability will provide a strong foundation for investments in theatre command and control systems, warfighting networks and applications, and enterprise data and digital programs.

Investing in the integrated, focused force

This Strategy provides a clear roadmap for Defence's data requirements. It builds on the foundations of the inaugural Defence Data Strategy 2021-2023, and responds to the direction set by the Government through the 2024 National Defence Strategy.

Defence must operate from the basis that the information environment it will operate in and through over the next decade will be increasingly contested, if not denied. Access to, and use of our data assets relies on the resilience of our digital networks, which must be able to move more data—and at greater speed and volume.

Data needs to be recognised as a fundamental input to capability to ensure the interoperability of the integrated, focused force. Optimising Defence by better using its strategic data asset increases the preparedness and effects of our military capabilities.

An integrated, focused force with enhanced data capabilities will contribute to deterrence and hold an adversary at risk further from our shores. It makes our weapons systems and capabilities more effective and survivable in a contested environment. The ability for commanders to contextualise and analyse data more quickly and securely will allow them to move to better decisions faster than an adversary.

The 2024 Integrated Investment Program identifies that the integrated, focused force requires core capabilities, including maritime and undersea warfare, targeting and long-range strike, space and cyber, an amphibious capable combined-arms land system, expeditionary air operations, missile defence, a guided weapons and explosive ordnance enterprise, theatre logistics and theatre command and control. These capabilities require Defence to use more data, more effectively, and more quickly than ever before.

Defence must ensure that its data requirements for the integrated, focused force are identified and defined clearly between the strategic centre and the tactical edge.

Defence must be a data-driven organisation so that it can provide clear and consistent advice, high-quality services and efficient processes. This requires ongoing investment in strategic data platforms that can scale to meet future demand, and implementing a modern enterprise integration platform that can support analysis, decision support and reporting.

Finally, data will enable Defence to optimise our people and resources against strategic priorities. This will allow Defence to maximise the capability effects from the resources that have been allocated by the Government, and identify areas of greatest value for future investment.

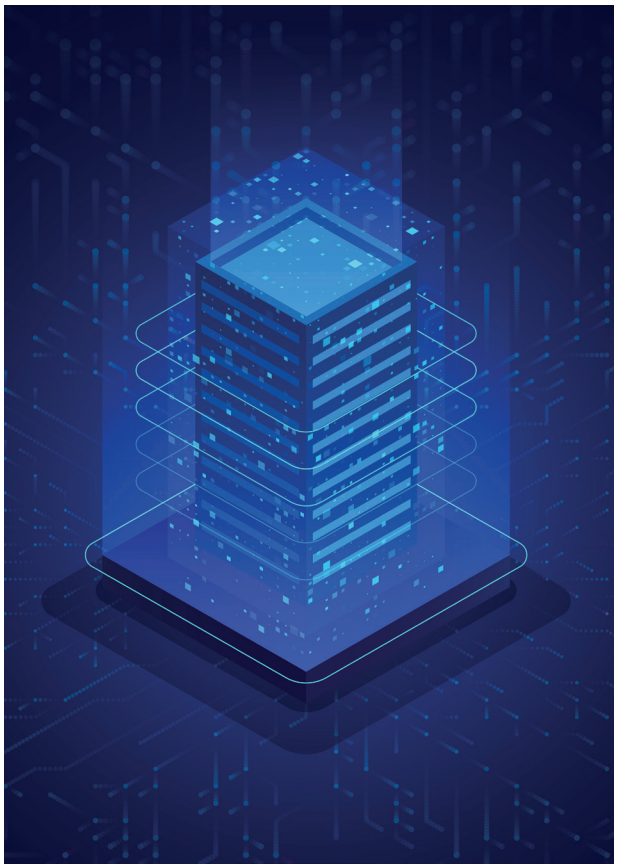
What is data?

Data is the raw material from which information and ultimately intelligence can be derived. It includes text, numbers, graphics, images, sound and video. In the Defence context this includes data that is generated and used from corporate and warfighting contexts, and from the strategic centre to the tactical edge.

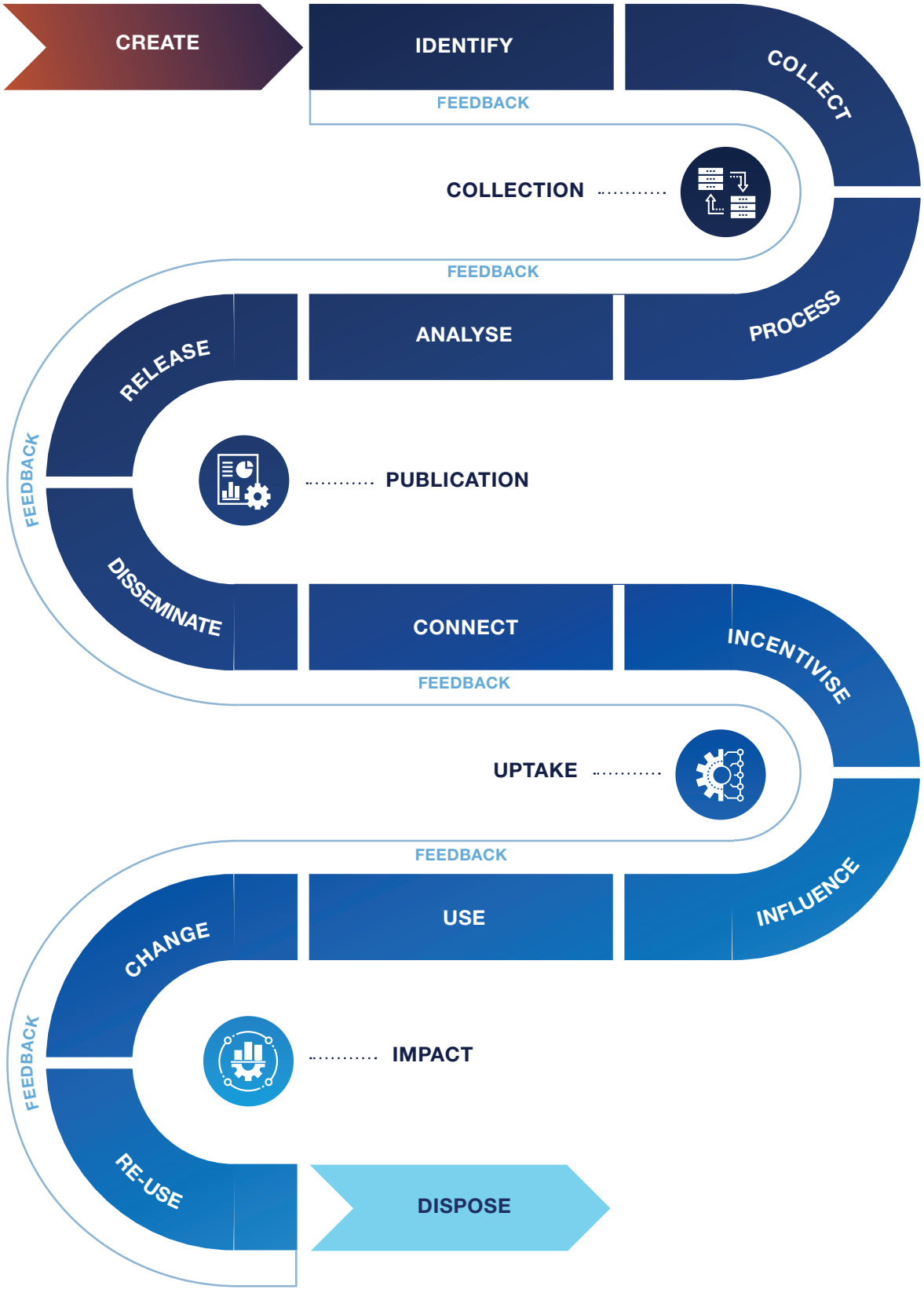
Some data is easily recognisable such as administrative data, numbers in a spreadsheet, or dates in a table. Some data is less recognisable such as emails, surveys, audio files, videos, photographs, maps, documents and reports—it also includes the metadata associated with these artefacts.

The data value chain

Data is a strategic asset for Defence, and needs to be managed through each stage of its lifecycle so that maximum value can be extracted. This requires constant feedback between the producers and consumers of data and analytics products. The data value chain (on page 7) outlines the process of how Defence's data becomes valuable knowledge for our operations and data enabled service delivery.



The data value chain



Defence Data Strategy 2.0

Defence Data Strategy 2.0 continues Defence's journey to improve the treatment of data as a strategic asset. Data is fundamental to optimising the design, development and deployment of the integrated, focused force as a key element of Australia's national power.

Defence Data Strategy 2.0 builds on the foundations laid by the first data strategy and responds to the direction set by the Government through the 2024 National Defence Strategy and Integrated Investment Program.

This Strategy sets the vision that Defence will be a data centric organisation that uses data to enhance preparedness, optimise service delivery and realise decision advantage as a prioritised capability effect.

This Strategy outlines a coherent framework for achieving this vision—illustrated through the strategy on a page (page 9)—which remains guided by the driving principles of Govern, Trust, Share, Discover and Use.

Defence will manage its data assets through enterprise data domains which will align the governance of data assets and products to the functional expertise of data domain custodians and managers. This federated governance ecosystem will support the shift to a data mesh. Integrated data management practices will ensure that data assets are of sufficient integrity, quality and resilience throughout all stages of the data value chain.

Coordinated investment, supported by an enhanced One Defence Capability System that recognises data as its own fundamental input to capability, will deliver platforms, networks and applications that seamlessly integrate data in accordance with the 2024 Integrated Investment Program.

Strategy on a page

DEFENCE DATA STRATEGY 2.0

2024 National Defence Strategy:
Achieve decision advantage

Vision: Defence uses data to enhance preparedness, optimise service delivery and realise decision advantage.

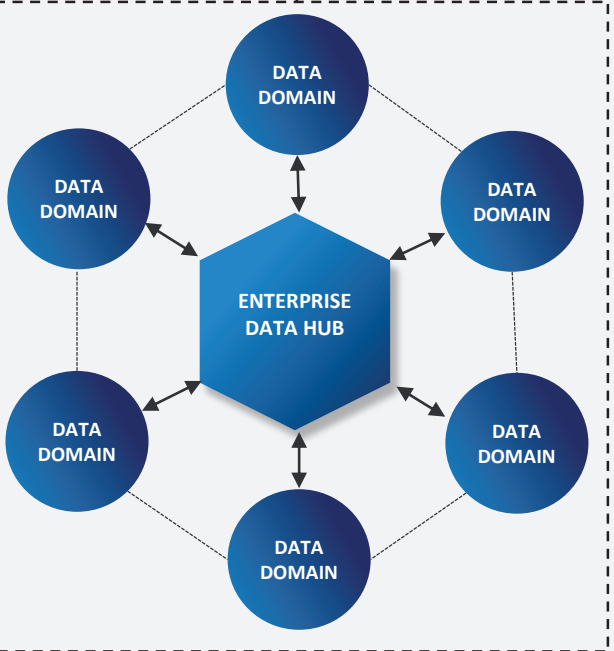
ANALYTICS / BUSINESS INTELLIGENCE / ARTIFICIAL INTELLIGENCE

TACTICAL DEPLOYED WARFIGHTING

DATA PLATFORMS

ENTERPRISE STRATEGIC

INTEGRATED DATA MANAGEMENT



INITIATIVES

GOVERN

- 1.1 Detailed Data Strategy 2.0 Implementation Plan
- 1.2 Establishing data as a standalone fundamental input to capability
- 1.3 Federated data governance to support a meshed data environment
- 1.4 Evolve enterprise data domains
- 1.5 Coordinated integrated data management

TRUST

- 2.1 Investigate policy and legislative reform to better protect Defence data
- 2.2 Implement zero trust architecture and data centric security
- 2.3 Establish unified information governance
- 2.4 Implement data cultures

SHARE

- 3.1 Enhance policy and legislative options to better share Defence data
- 3.2 Accelerate data interoperability
- 3.3 Implement a data integration and access layer across the fixed and deployed environments

DISCOVER

- 4.1 Enhance trusted data exchange between the strategic centre and deployed edge
- 4.2 Implement a data fabric proof of concept
- 4.3 Prioritise data assets for strategic competition

USE

- 5.1 Accelerate data literacy uplift
- 5.2 Implement data centric architecture
- 5.3 Deliver data informed enterprise decision making and resource allocation
- 5.4 Data drives One Defence Capability System optimisation
- 5.5 Prepare for artificial intelligence at scale

ONEDEFENCE DATA PLATFORM: OPERATIONALISING DEFENCE'S STRATEGIC DATA ASSET

The OneDefence Data platform will be used throughout Defence as a critical enabler of the integrated, focused force, and will be key for Defence realising decision advantage. It will allow people to focus on delivering outcomes not processes, in order to achieve Defence's mission.

The power of the OneDefence Data platform will be achieved through the linking together of disparate data sources to enable enterprise-wide data catalogues, archiving, search, access and analytics. The ability to seamlessly discover, access and derive advanced insights from Defence's vast data assets will drive enhanced preparedness and availability of the integrated, focused force, as well as resource prioritisation and planning in support of the 2024 National Defence Strategy objectives.

The OneDefence Data Platform provides a common interface linking the fixed information environment with Defence's future warfighting network and applications. This ensures resilient and secure cross-domain data exchange at scale and speed, with data analytics capabilities spanning the fixed and deployed environments. The OneDefence Data platform will empower commanders to make faster, better-informed decisions to realise decision advantage. The warfighter will benefit from a seamless ability to access and exchange data and analytics at the deployed edge where Defence's data will be a force multiplier.

The OneDefence Data platform will bring together a reliable and accurate common operating picture. The insights will enable enhanced decision making on the allocation of people and resources to Defence priorities. It will inform and enable decisions relating to unit readiness, fleet maintenance schedules, career management and progression planning, logistics planning, estate use and utilisation, and numerous other Defence functions.

The OneDefence Data platform will provide the tools for advanced analytics and discovery that will transform Defence's vast data holdings into a valuable asset.

Trusted and reliable data is a critical foundational requirement for artificial intelligence and machine learning. The OneDefence Data platform will provide the foundation for Defence to implement artificial intelligence and machine learning at scale across the enterprise. This will allow Defence to implement digital twin technology at scale, which will enable the simulation of scenarios and their outcomes to support decision making.

JOINT COMMAND AND CONTROL NETWORK: DEFENCE'S FUTURE WARFIGHTING NETWORK AND APPLICATIONS

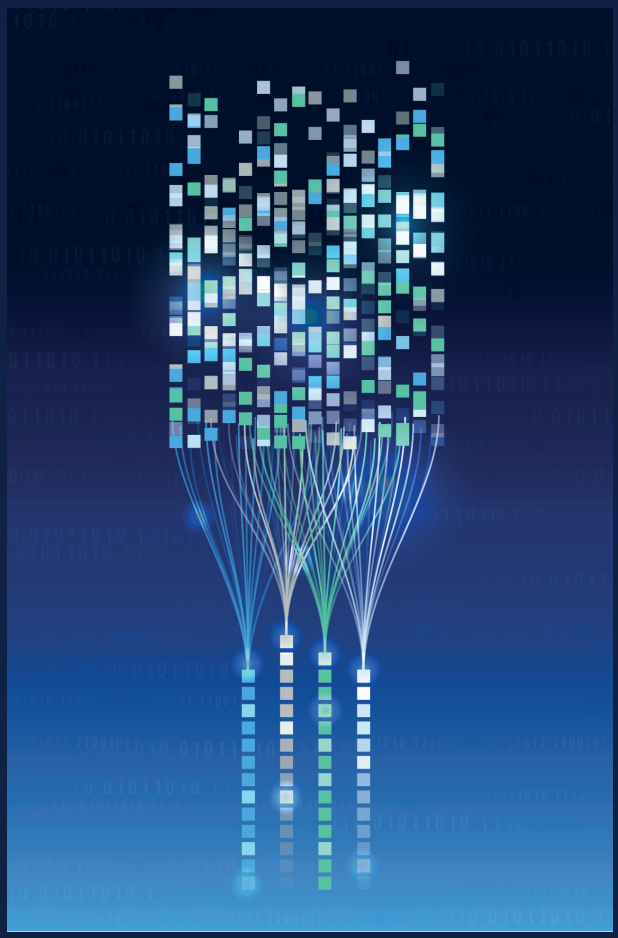
Through the 2024 Integrated Investment Program, significant investments will be made in Defence's warfighting networks and command and control systems, to strengthen Defence's ability to manage and use its data as a strategic asset.

Defence's future warfighting network and applications, the joint command and control network, will be central to how the integrated, focused force will fight and prevail. The joint command and control network will be data centric by design with advanced security and data architectures that are more resilient, secure, survivable and scalable from the centre to the edge.

The joint command and control network will be underpinned by our advanced data analytics and automation capabilities—including the OneDefence Data platform—to deliver easier and more rapid access to information wherever it is required. It will leverage technologies and processes such as zero trust architecture to ensure greater control over our data across a complex, multi-domain environment.

Supported by a meshed data environment, the joint command and control network will support fifth generation warfighting requirements through high-volume computing and storage. Our data will connect our intelligence, surveillance and reconnaissance sensors across all warfighting domains with our commanders and weapon systems to enable autonomous decision making.

Treating data as a fundamental input to capability will allow future tranches of Defence's future warfighting network and applications to be built with Defence's future data requirements and technology ambitions at the centre of the design phase, reducing delays and increasing efficiencies.



Strategic Initiatives: decision advantage in the data age

Defence Data Strategy 2.0 outlines a range of initiatives grouped under the Driving Principles of Govern, Trust, Share, Discover and Use. These initiatives are designed to unify efforts and investments in data capabilities in a timeframe consistent with the National Defence Strategy. These initiatives are designed to:

- evolve Defence's data governance arrangements to enable a flexible, scalable and 'meshed' approach to governance and data management
- ensure data requirements for the integrated, focused force are incorporated and addressed through the One Defence Capability System
- optimise decisions around capability investment and resource allocation
- provide higher quality data to the warfighter, and get it to them faster
- enhance the security and integrity of Defence's data so that it can be better protected and shared
- strengthen Defence's data cultures, literacy and behaviours
- accelerate the development of innovative and experimental approaches to data search and exploitation.

GOVERN

1.1 Detailed Data Strategy 2.0 Implementation Plan

The successful realisation of the vision and goals of Defence Data Strategy 2.0 will be underpinned by a detailed implementation plan, developed and overseen by the Chief Data Integration Officer with regular progress reporting to the Defence Data and Analytics Board.

1.2 Establishing data as a standalone fundamental input to capability

This will drive better consideration and management of data requirements and interoperability in order to achieve directed capability requirements in alignment with the 2024 Integrated Investment Program.

1.3 Federated data governance to support a meshed data environment

Defence will evolve its governance arrangements so that enterprise data custodians can govern data within their domain while operating within broad, centre-led boundaries to drive cohesion across the enterprise. This allows the effective management of data where it is created and the use and reuse of data through data products available to users throughout the enterprise.

1.4 Evolve enterprise data domains

Defence data domains will evolve from the current organisational structure approach, to one that enables the governance and development of data and data products, and leverages specific functional expertise to achieve specific mission outcomes.

1.5 Coordinated integrated data management

Defence will improve data quality and the management of data as a product to increase the integrity, availability and utility of Defence's strategic data assets to support decision advantage and data enabled services.

TRUST

2.1 Investigate policy and legislative reform to better protect Defence data

Defence will engage with the evolving legislative and policy data ecosystem and develop options to ensure adequate and appropriate protections are applied to sensitive and classified data.

2.2 Implement zero trust architecture and data centric security

Defence will implement zero trust architecture to allow more precise access controls to data, which will enable a more agile, scalable and responsive security posture to be applied across multiple environments. This will both increase security of defence data, and enable more streamlined and faster access to defence data for those users that need it.

2.3 Establish unified information governance

Defence will strengthen and harmonise its information management policies, processes and procedures to better support, protect and serve the Australian community and enhance trust in Defence as a public institution.

2.4 Implement data cultures

Defence will implement a workforce culture that understands, values, shares, manages, and uses Defence's data as a strategic asset.

SHARE

3.1 Enhance policy and legislative options to better share Defence data

Defence will investigate legislative and policy options to enhance how Defence shares data sets with our allies and other Government agencies. This includes implementing the requirements of the Data Availability and Transparency Act 2022.

3.2 Accelerate data interoperability

Defence will progress activities to enhance data interoperability across the integrated, focused force, with allies and other Government agencies.

3.3 Implement a data integration and access layer across the fixed and deployed environments

Defence will focus its investments in warfighting networks, data, and applications to prioritise data integration for the warfighter and to enable standardised and controlled data access protocols. Data will be generated once and used many times, avoiding replication of data throughout the environment.

DISCOVER

4.1 Enhance trusted data exchange between the strategic centre and deployed edge

Defence will facilitate more efficient collection, integration and analysis of data at the deployed edge to enhance situational awareness and facilitate sensor-to-effector networks.

4.2 Implement a data fabric proof of concept

Defence will deliver a data fabric proof of concept that integrates data from discrete data sources to allow data to be discovered, analysed and consolidated across disparate systems for use across the federated data ecosystem.

4.3 Prioritise data assets for strategic competition

Defence will build a better understanding of its data holdings and ecosystem and will make informed and prioritised decisions on data requirements to meet strategic objectives.

USE

5.1 Accelerate data literacy uplift

All Defence personnel will be provided learning and development opportunities to build their data literacy, and develop the skills and knowledge to use and analyse data. Defence will also invest in developing new professional pipelines for skilled individuals.

5.2 Implement data centric architecture

Data domain owners will adopt enterprise data architecture standards and patterns to enable the integration of data and the agility to respond quickly to emerging scenarios. Data centric architectures will be defined centrally and implemented in a federated approach within data domains. Data centric architecture will embed data centric security considerations to provide assurance on the veracity of data.

5.3 Deliver data informed enterprise decision making and resource allocation

Defence's decision making and resource allocation will be optimised by bringing together key data sets from disparate systems for analytics, which will support the alignment of people and resources to Defence priorities.

5.4 Data drives One Defence Capability System optimisation

Defence's capability decisions will be data-driven and based on desired strategic effect rather than individual project imperatives. Defence will enhance the ability of decision makers to see implications, consequences and risk/benefits of reprioritising programs and funding in accordance with the 2024 Integrated Investment Program.

5.5 Prepare for artificial intelligence at scale

Defence will prepare for the adoption of artificial intelligence at scale through enhanced governance, research and innovation, partnering, coordinated investment and capability development.


DRIVING PRINCIPLES
Defence Data Strategy 2021-2023
Govern
Chief Data Integration Officer role
Data Division established
Data Strategy Implementation Plan
Defence Data Operating Model
Defence Data and Analytics Board
Government and Five Eyes engagement
Incorporating data into the Command and Management FIC
Trust
Enterprise data standards and guidelines
Data assurance mechanisms
Data quality ratings
Data Security Policy
Data retention, archiving and disposal
Share
Data capability assessment
Data custodianship
Data sharing and ethics
Discover
Records Management Policy
Records Management Guidelines
Enterprise data catalogue
Enterprise search functionality
Enterprise data integration platform
Use
Data literacy training
Data training continuum data
Specialist career streams
Data job families
Data exchanges and secondments
Data platform stocktake
BI capability and training
STATUS
Done
In Progress

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KEY: Partnerships | Technology / Security | Capability | Preparedness | People

Glossary

data capability	The power to achieve and sustain a desired data and analytics operational effect in a nominated environment within a specified time.
data centric security	A security approach focusing on securing data itself—not its container or storage location—when it is at rest or in motion.
data domain	A data domain represents a specific area or category of data that is organised and managed based on its subject matter or functional context.
data fabric	A data fabric is an emerging data management approach that simplifies the management and integration of data across various systems and locations. A data fabric supports both operation and analytics use cases delivered across multiple platforms and processes. Data fabric supports a combination of different data integration styles and leverages active metadata, knowledge graphs, semantics and machine learning to augment data integration design and delivery.
data mesh	An architectural approach that decentralises the custodianship and management of data to share, access, and manage analytical data in complex and large-scale federated environments—within or across organisations. The principles that underpin data mesh are around establishing domain ownerships, data as a product, self-service data platform and federated governance.
data product	Data products are packaged solutions that transform raw data into actionable insights aimed at serving specific business or analytical objectives.
zero trust architecture	A security model that requires strict verification for every user and device trying to access resources in a network, regardless of whether they are inside or outside the network perimeter.

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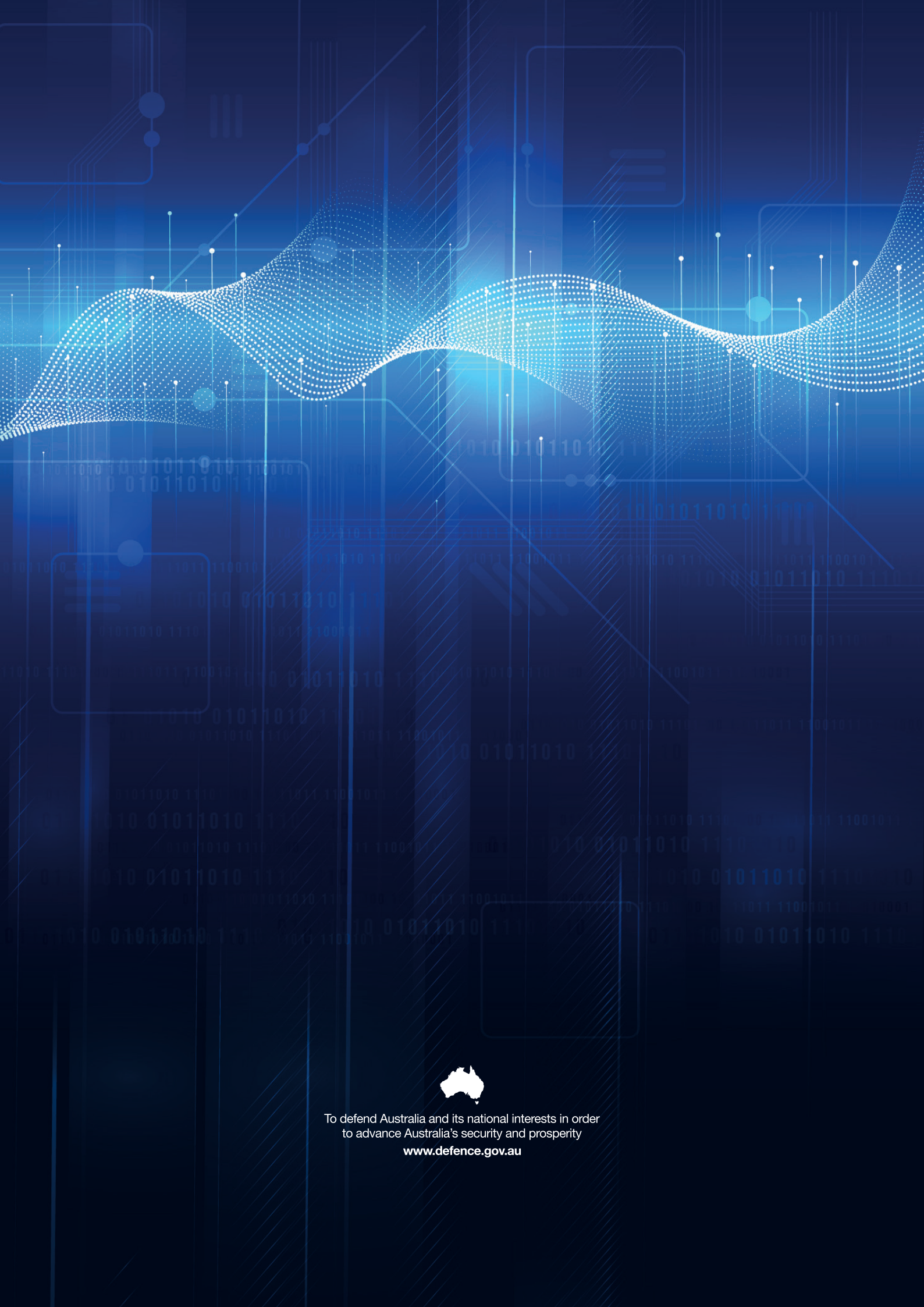

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