consunet®

CAPABILITY STATEMENT

BUILD THE CYBER AND SPECTRUM SECURITY FUTURE

INNOVATION DELIVERY SUPPORT

Mission

Scale up to solve our customers' most complex problems with speed, efficiency and reliability.

Values

Trusted
Trust is earned. This is our principal value proposition. Trust permeates our organisation and underpins all our values.

Sovereign
We create enduring knowledge and technology for Australia and allies.

Excellent
We strive for excellence as a habit.

Leading
We lead with vision, innovation, and execution. In everything we do, we continuously challenge ideas, learn, and improve to exceed expectations.

Sustainable
We are sustainable through customer satisfaction, personnel satisfaction, business continuity, and environmental respect.

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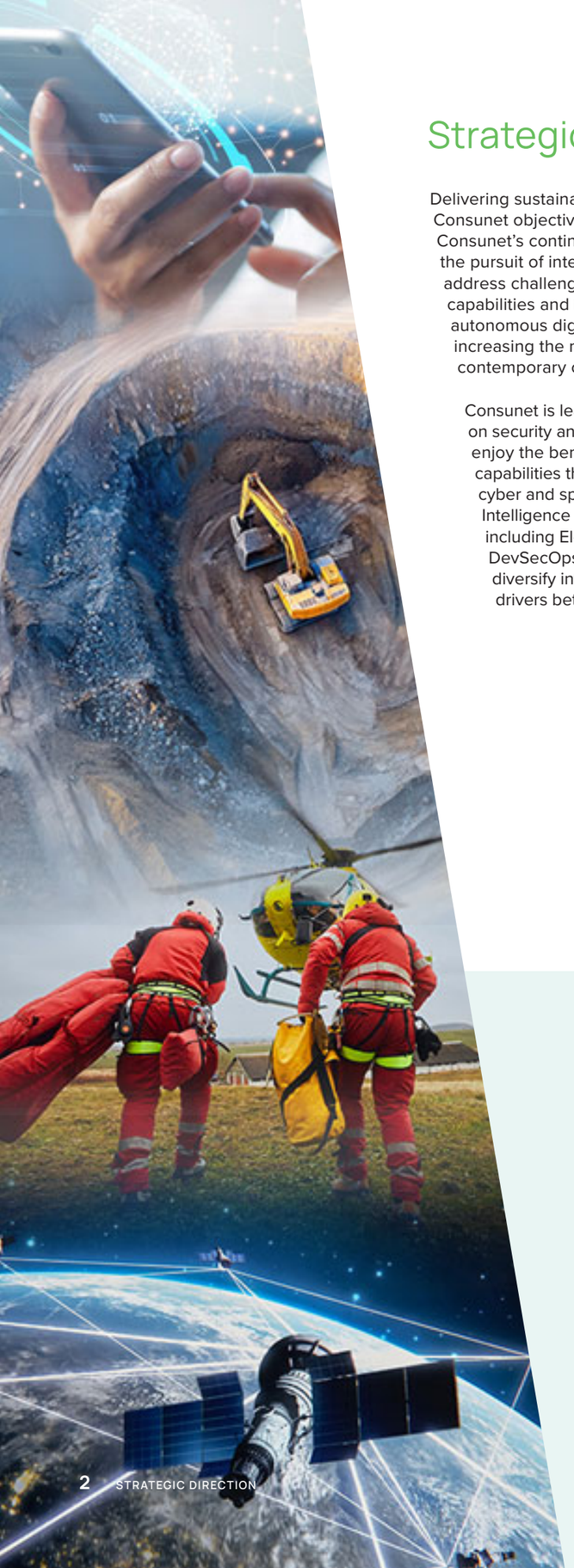


Strategic Direction

Delivering sustainable, national interest outcomes is an enduring Consunet objective shaping business intent, strategy and investment. Consunet's continued growth and market diversification is enabling the pursuit of international markets to seize new opportunities and address challenges consequential to new Artificial Intelligence (AI) capabilities and the rapid development of mobile and increasingly autonomous digital devices. Escalating geostrategic tensions are increasing the need for autonomy and agility to rapidly address these contemporary challenges.

Consunet is leading advanced technology development with a focus on security and trust. To ensure that future generations enjoy the benefits we have today, we are building unique capabilities that assure freedom within the growing and complex cyber and spectrum landscape. We have extensive Defence and Intelligence market experience in the Information Warfare domain including Electromagnetic Warfare, Spectrum Management and DevSecOps capability delivery. We are leveraging our expertise to diversify into commercial markets, but cognisant of the different drivers between defence and commercial sectors.

Our strategic goals are to:

- **Become a large Australian enterprise that serves the international market**
  Consunet is working to become an enterprise with staff who deeply understand our customers' needs at a scale to solve their problems. We are fostering a culture where people know each other, collaborate, and have autonomy to quickly make decisions. This will anchor our foundation as a large enterprise enabled by trusted people.

- **Disrupt the Spectrum Management market**
  Our technology is changing the way the electromagnetic spectrum is accessed. Spectrum access is currently controlled in a centralised manner, impeding rapid reconfiguration in response to changing demands, natural disasters or acts of terrorism. We are translating our advanced Defence capabilities into markets that critically depend on spectrum access.

- **Maintain our Information Age Capability Factory**
  Our customers benefit from reliable and enduring capability. Our people harness real-world experience, deep knowledge of AI and Machine Learning (ML) and industry best practices, processes and tools to deliver trusted, safe and sustainable outcomes. Predictable delivery of trusted advanced technologies is the key value proposition and differentiator.

- **Grow to achieve a one billion dollar valuation by 2030**
  We are building essential technology for the future and growing to a scale needed by our customers

Differentiators

- Export Ready and Allied Nation Interoperability
- Secure AI and Emerging Tech Leadership
- Trusted Delivery Partner
- Workforce Excellence and Veteran Engagement

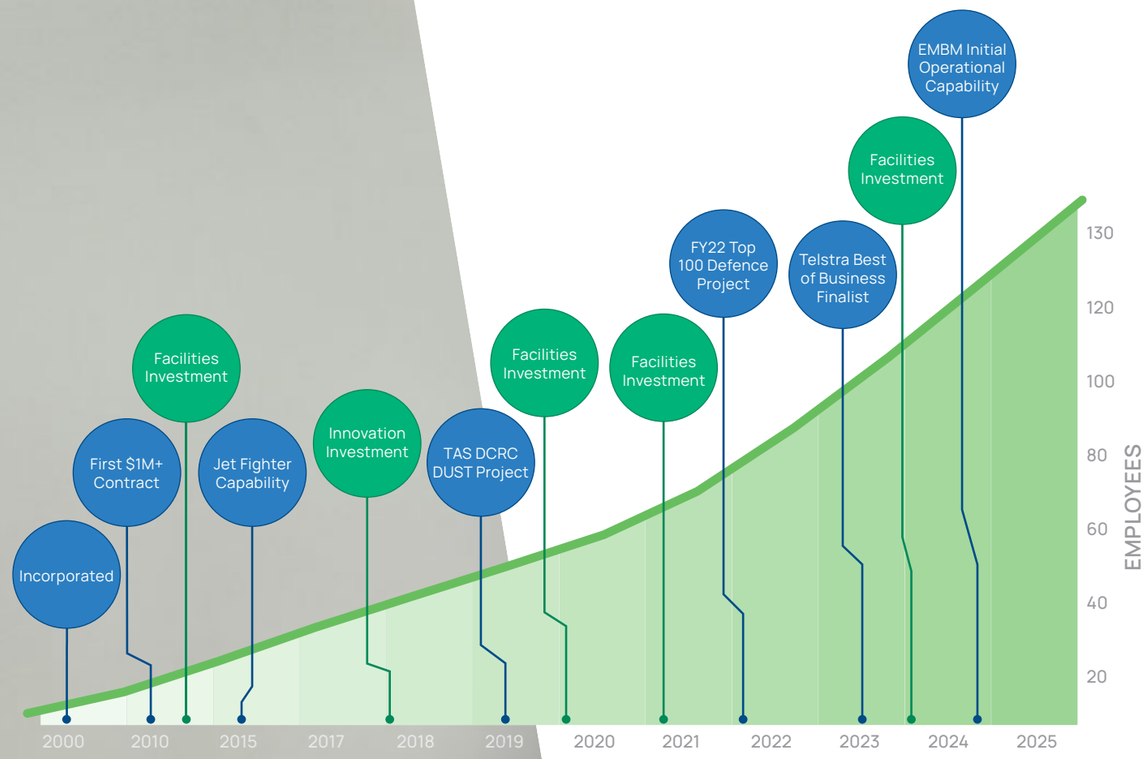
Collaboration and Integration
Agile management, automation and trusted data and systems are essential drivers for enterprise efficiency, sustainability and competitiveness. Consunet's advanced Software Engineering, Cyber & DevSecOps capabilities underpin our Innovation, Delivery and Support functions. Business innovation is necessary to complement successful technology innovation, and we understand that collaboration and integration across multiple fields are the key to maximising success. Consunet is creating trusted, globally relevant, game-changing cyber and spectrum capabilities to safeguard our customer and community interests.

Who We Are

Consunet is an Australian enterprise with over 25 years of experience delivering trusted, secure and innovative solutions to the Australian Defence and Intelligence markets. Specialising in Electromagnetic Warfare, Spectrum Management and Cyber & DevSecOps, our dedicated team of professionals' design, develop, deploy and support high-assurance systems to address contemporary Electromagnetic Warfare and Spectrum Management challenges of global relevance.

Consunet's world-leading technology is underpinned by an accomplished Research and Development capability that leverages Artificial Intelligence, Machine Learning and Agent Based approaches to continually deliver new and resilient solutions to complex problems. Our engineering teams leverage DevSecOps practices to create and support operational solutions that deliver a true capability edge. By transforming legacy, human-driven methods into dynamic, autonomous systems, we can deliver near real time and efficient spectrum assurance.

Our vision is to build the cyber and spectrum security future. We are translating our Defence capabilities into commercial use to secure the way we interact with tomorrow's world.



Kuba Kabacinski
Chief Executive Officer

Emma Crosby
Deputy Chief Executive Officer

Dr Don Gossink
Chief Scientist

Robert Douglas-Stewart
Chief Information Office

Dinuke Ranasinghe
Chief Product Officer

Recent Awards

Industry Achievement Award 2024
IW Business Award 2024
Science and Technology Achievement Award 2024
Kuba Kabacinski, EY Entrepreneur Of The Year™ Australian national finalist, Services Category

CAPABILITY

Electromagnetic Warfare

The Electromagnetic Spectrum (EMS) is a critical resource for military operations, but it has also given rise to new challenges. It is becoming increasingly difficult for our forces to deny and degrade the adversary's ability to use the EMS, whilst ensuring friendly forces have unimpeded access. Rapidly advancing technologies accelerate complex spectrum challenges such as emitter conflicts and anomalies, severely limiting effective manoeuvre within the Electromagnetic Operating Environment (EMOE).

Consunet specialises in high-assurance Electronic Warfare (EW) and Information Warfare (IW) solutions, utilising sensor/effector systems, signal detection and exploitation capabilities, enterprise data fusion, information battlespace management and complex, multi-system integration. We build, deploy and support dynamic EW solutions that enable more efficient use of the spectrum.

Consunet's EW capabilities provide:

- **Situational Awareness**
  Consunet's near-real-time signal data and geospatial technologies enable visualisation and a comprehensive situational understanding of the EMOE.

- **Survivability**
  Consunet's EW capabilities model, plan and predict spectrum utilisation and dynamically adapt to the changing EMS environment, enabling resilience and ensuring network survivability.

- **Signals of Interest**
  Using both traditional and contemporary Artificial Intelligence (AI) techniques, signals are extracted and exploited to provide information and insights relating to emitters.

- **EMS Support**
  High-assurance EMS monitoring, ongoing support and innovative thinking are used to deliver valuable solutions to complex EMS challenges.

PRODUCT

EMBM

Electromagnetic Battle Management (EMBM), delivered by Consunet, is a modern software solution designed to redefine the military planning process. EMBM uses an open, scalable, and software-agnostic architecture which enables flexibility to adapt to new EMS challenges and opportunities as they arise. EMBM provides the warfighter with the tools to plan, simulate, execute, monitor and evaluate EMS usage and manoeuvre within the EMOE. EMBM seamlessly integrates data from various force levels and government agencies, supporting situational awareness and EW Command and Control (C2).

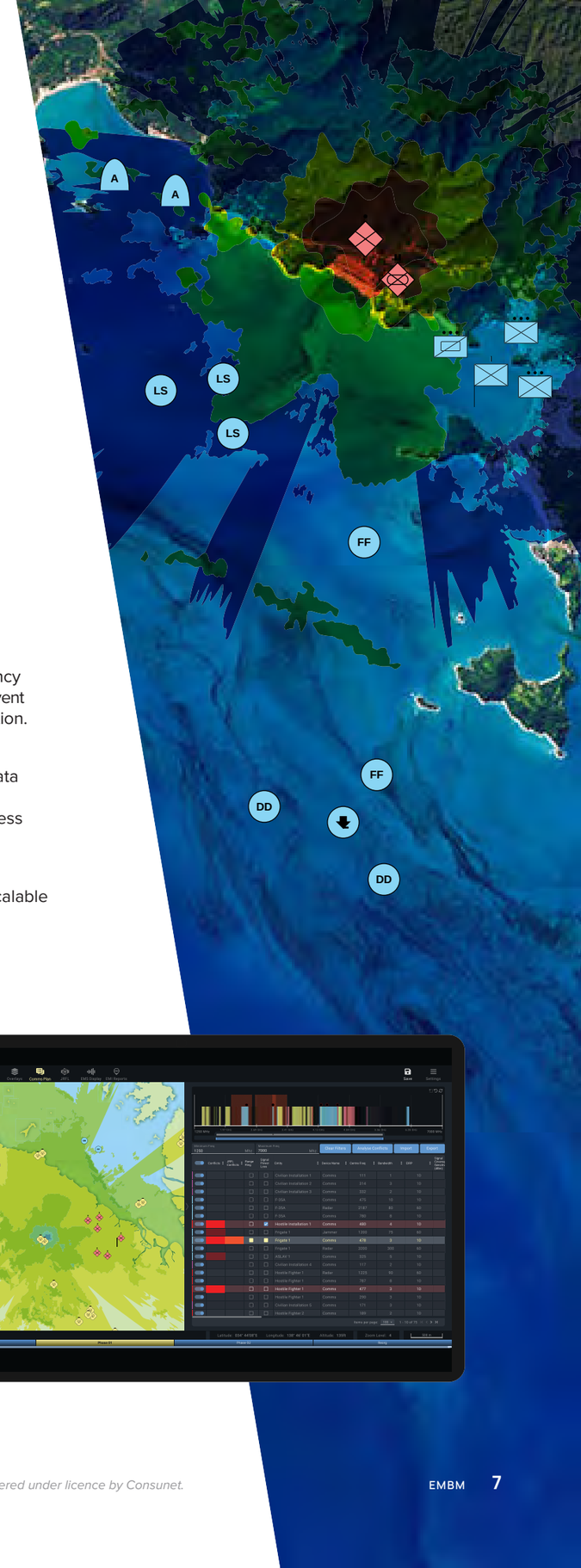
The EMBM software provides:

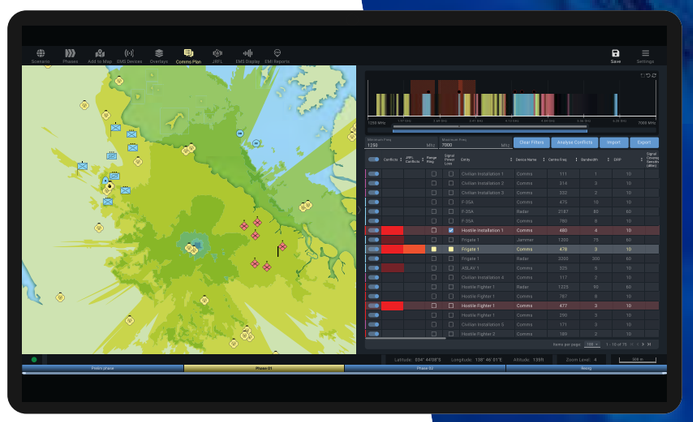
- **EMS Visualisation and Usage**
  EMS effects are spatially visualised using geographic data and advanced radio frequency propagation models to enable the warfighter with a decision advantage.

- **EMS Conflict Analysis**
  EMBM automatically detects overlapping frequency allocations to enable clear communications and prevent interference, providing advanced EMS deconfliction.

- **Data Integration**
  EMBM can be tailored to seamlessly integrate data from various force levels, providing users with a unified solution that supports situational awareness and EMS superiority.

- **Open Architecture**
  EMBM's open architecture provides a flexible, scalable and cost-efficient solution.





Built on technology owned by the Commonwealth of Australia and delivered under licence by Consunet.

CAPABILITY

Spectrum Management

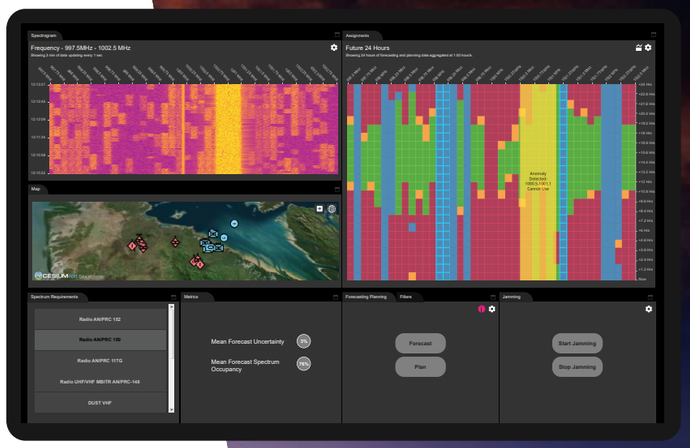
Since the advent of radio communication, access and usage of the Electromagnetic Spectrum (EMS) has been carefully controlled in a centralised manner, using a complex system that hasn't changed in over 100 years. EMS access is critical to effective communications, however high-growth industries, such as space and Internet of Things (IoT), autonomous cars and sensor systems, are creating ever-increasing demand, competition and congestion.

The EMS is a key influence on the outcome of military operations, as allied and opposing forces fight to obtain and maintain access to the critical resource. Assured Spectrum Access and Network Survivability are essential to guarantee freedom of manoeuvre within the spectrum.

Using our expertise in Artificial Intelligence (AI) and Machine Learning (ML), Consunet has responded to growing demands for efficient and effective EMS management, delivering innovative solutions that can be deployed for commercial and defence settings.

PRODUCT

DUST



Consunet has developed Distributed aUtonomous Spectrum managemenT (DUST) technology to efficiently and effectively manage the EMS. Critical to military communications, spectrum management enables effective EMS spectrum maneuverability and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) in complex, congested and contested electromagnetic operating environments.

DUST utilises current AI and ML techniques to deliver dynamic spectrum allocation, assured spectrum access and network survivability. By coordinating spectrum access across multiple users and devices including radar, sensors, communication systems and satellites, DUST provides the warfighter with a contemporary solution for multi-domain command and control. An example DUST use case is cUAS missions, where DUST provides resilient communication bearers that ensure minimal spectrum emissions to reduce the probability of detection. The underlying communication network of cUAS systems are protected against enemy effectors, enabling cUAS missions to complete successfully.

In commercial settings, DUST ensures that users gain greater access to the spectrum when they need it.

DUST's capabilities include:

- **Spectrum Availability**
  DUST's autonomous systems enable dynamic spectrum allocation, rapidly adapting to provide spectrum availability based on time, space and the needs of the customer.

- **Trusted Spectrum Trading**
  DUST's modern trusted trading technologies are used to reassign spectrum from users who have surplus to those with spectrum deficiencies. Spectrum trading is a critical process that optimises wireless communication, in addition to identifying and nullifying non-cooperative actors.

- **Spectrum Simulation**
  DUST includes a simulation used to validate the capabilities of the system in new environments at city level scales. Simulations support the generation of training data for ML models which enables testing of specific environments before deployment.

- **Spectrum Forecasting**
  DUST utilises advanced ML models to react and predict spectrum patterns and opportunities that adapt to ever-changing situations.

- **Anomaly Detection**
  DUST monitors the spectrum for anomalous behaviour and identifies unusual activity in near real-time. Using anomaly detection capabilities, DUST can plan to avoid unexpected situations.

CAPABILITY

Cyber & DevSecOps

Cyber threats are becoming more prevalent and pervasive as malicious actors seek to obtain sensitive data or disrupt services. It is critical that security checks are embedded throughout the entire software development lifecycle to ensure cyber-attack resilience and protect users, customers and their data. Delivering new and enhanced functions to end users at speed is also essential to maintain customer satisfaction and achieve a competitive advantage.

Consunet's Cyber & DevSecOps services provide a best practice and holistic approach to ongoing software application delivery at speed with high security and trust.

Consunet's Trusted Cyber & DevSecOps services promote:

- **Speed to Capability**
  Increased development tempo through automation, automatic monitoring and use of reusable templates and playbooks.
- **Collaboration and Productivity**
  Cloud native technologies, together with open-source, open standards and open architecture practices, foster collaboration between industry, defence and defence research organisations, exploiting different skill sets and subject matter expertise.
- **Accreditation**
  Consunet has facilitated the long and costly Defence System Accreditation process and successfully delivered accredited solutions that are currently supporting, modern, secure operational capabilities in service with the Australian Defence Force.

Consunet's DevSecOps services ensure high-assurance software delivery and operations in an increasingly volatile cyber threat environment.

Cloud Native Software Framework and Information Age Capability Factory
Consunet's Cloud Native Software Framework is a set of principles, protocols and processes for designing, delivering and supporting operational systems. Developed using Consunet's Information Age Capability Factory, the Framework promotes reusable, rapid, secure software development and deployment cycles, enabling fast delivery of new features and solutions. Capabilities can be scaled to meet changing needs reliably and securely.

SERVICES

Cyber & DevSecOps

Defence Grade Security Services
Consunet actively manages, monitors and operates multiple Defence, Industry ICT and DevSecOps environments. These services and skills enable Consunet to provide Defence grade security (cyber and physical security) for Windows and Linux based environments within physical server infrastructure, virtualised or Kubernetes containerised environments.

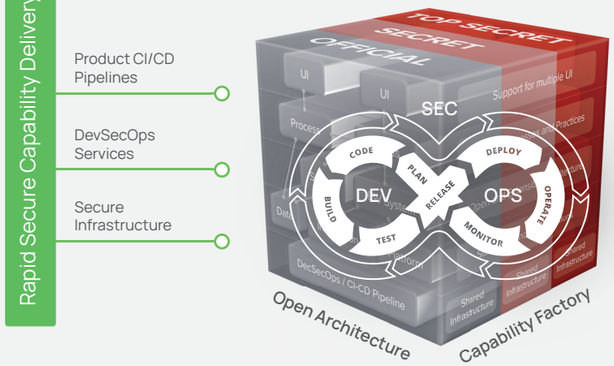
Infosec Registered Assessors Program Assessments
Consunet's Infosec Registered Assessors Program (IRAP) services provide end-to-end support in the planning, assessment, security documentation and facilitation of the accreditation process for systems and customers.

DevSecOps and cATO Maturity Assessment and Reviews
Consunet's maturity assessment and reviews in the areas of DevSecOps and cATO are a systematic evaluation of a company's organisation, processes and tools, and governance to determine the level of development, effectiveness and alignment to best practices or standards.

DevSecOps Factory Development and Support
Consunet can establish new secure infrastructure or improve a current DevSecOps setup using cloud, on-premises, or hybrid environments. This service includes support, guidance and management for effective delivery and ongoing security and maintenance.

DevSecOps Advisory and Guidance
We can upskill teams, provide answers to complex problems, conduct security reviews, and design rapid delivery solutions in Defence and engineering-heavy environments.

Trusted DevSecOps Environments



CAPABILITY

Logistics

Logistics planning is the process of optimising resources to support operational deployments. Data is a fundamental input to this process to ensure the finite set of available supplies, facilities and personnel are maximised through the supply chain. Logistics planning in the military context is critical to ensure our warfighters are provided and sustained with the right supplies at the right time to support operational success.

Vast amounts of data are required to be assembled and structured to support logistics decision-making. The availability, integrity and ongoing management of data are crucial factors and if not considered, cause ongoing problems for the warfighter. A cultural shift focusing on data as a fundamental input to capability will support solving these problems to enable high confidence and trust in the outcome for the warfighter to make timely decisions.

With over 20 years' experience in data engineering for Defence logistics, Consunet is building capabilities that provide high quality, trusted sources of authoritative data. Using our applied scientific techniques and data-mined insights, Consunet is equipped to support and simplify the logistics planning process by providing software solutions with data-centric architectures for decision advantage. Our data engineering and automated feasibility and analysis capabilities provide operational and strategic level logistics planning assistance in the areas of sustainment and distribution.

Services

Innovation

Led by PhD and Masters level Research Applied Scientists, Consunet's innovation team delivers world-leading research outcomes and expert advice.

Prototype/Software Services
Consunet applies leading-edge technologies and approaches to facilitate the creation of sophisticated prototypes and globally relevant software solutions.

Advanced Demonstrators
We ensure the effectiveness of technological concepts by engaging advanced demonstrators to accurately exhibit capability performance.

Technology Maturation
Via established Engineering systems, Consunet facilitates technology maturation across the entire development pipeline from foundational, low Technology Readiness Level (TRL) concepts, to mid-TRL in-field demonstrations and in-service capabilities.

Artificial Intelligence and Machine Learning Expertise Services
Consunet's AI/ML experts use modern technologies such as Large Language Models (LLM), neural networks and generative AI, uncertainty, planning and scheduling, to provide greater insights and autonomous systems, decision aids and data analysis outcomes for a wide breadth of problem domains.

Support

Consunet's Support Organisation Framework consists of interrelated support elements that enable essential sustainment and delivery of In-Service Defence capability. Consunet are focused on achieving high-value operational outcomes through value-for-money support capabilities that are both cost-effective and fit for purpose.

Software Support
Consunet offers comprehensive product support services to manage and maintain software throughout life. This includes level 1, 2 and 3 support to ensure a high level of availability and reliability of product for our customers.

Support System Design
Consunet develops and implements the support system design in accordance with constituent capabilities. We provide operational support, engineering support, training support, maintenance support and supply support, tailoring the essential elements for optimised support solutions.

Delivery

Consunet's software engineering, systems engineering and project management teams utilise agile methodology best practices with quality assurance processes to deliver high-assurance capability development. Consunet's Architects, Systems Engineers, Software Engineers and Test Engineers work directly with customers to tailor fit-for-purpose engineering offerings to ensure timely delivery and high quality product outcomes.

Software Engineering
Consunet's software engineering services are delivered using agile software design and delivery practices including advanced DevSecOps best practices. Consunet's software engineering teams provide full stack expertise to design and develop software solutions.

Software Architecture
Consunet's architects identify the appropriate evolutionary architecture to meet the needs of the customer. We design systems using cloud native technologies and a modern open architecture approach to integrate systems, avoid vendor lock-in and reduce the cost of ownership.

Systems Engineering
Working directly with end users and customers, our Systems Engineers translate problems and needs into solutions using the full systems lifecycle to achieve the outcome required. Consunet uses agile Systems Engineering practices to bring customers along on the journey. Our Systems Engineering teams develop, design, verify and validate solutions and release product frequently using iterative delivery cycles. This approach reduces risk and costs to customers.

Project Management
Our project management services facilitate the successful delivery of project outcomes. Whether using Agile, Waterfall or other methodologies, our project management services can be tailored to meet the vision, outcomes, timelines and budgets.

Product Delivery
Consunet uses the Scaled Agile Framework (SAFe) methodology to deliver, evolve and adapt software capability at the speed of relevance to achieve customer vision and intent. Consunet's product delivery approach promotes Agile Engineering Speed-to-Capability and Minimum Viable Capability (MVC) deployment.

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