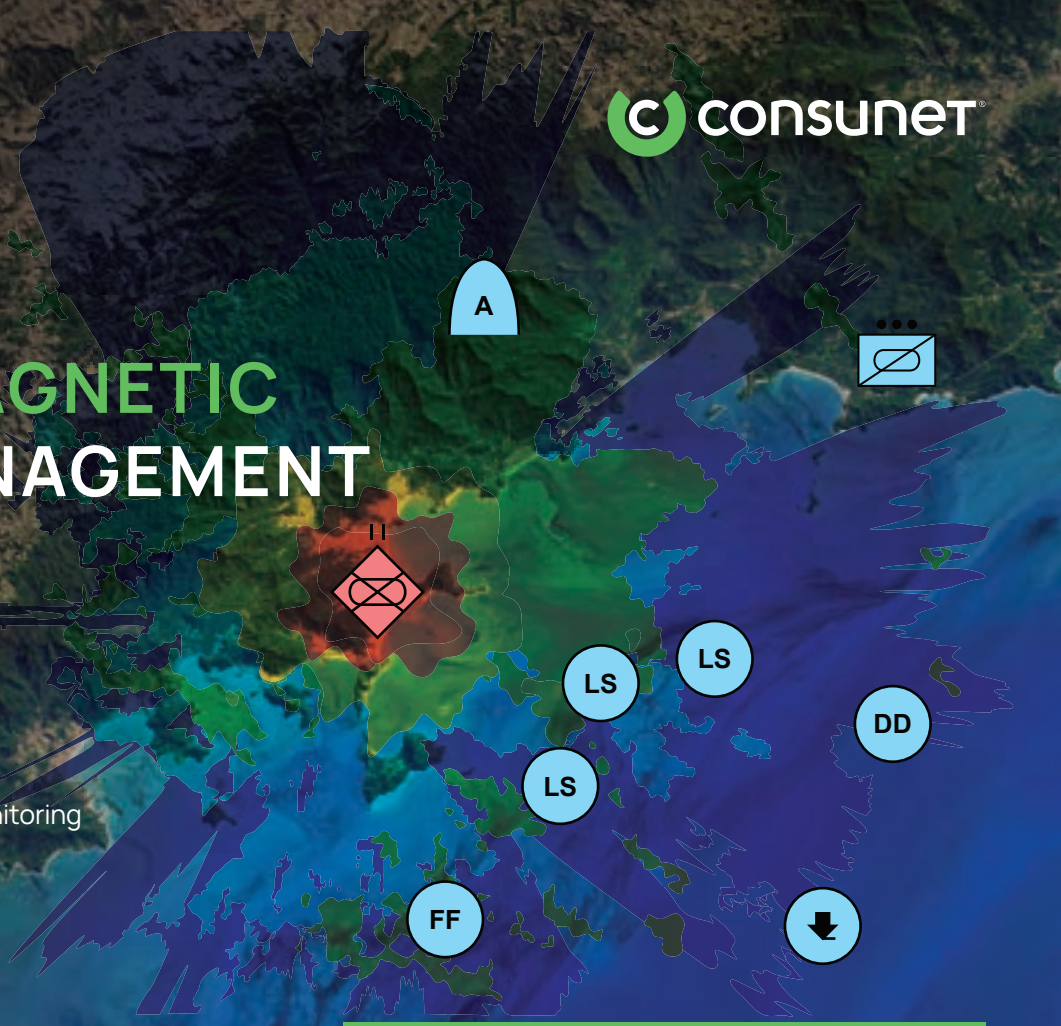
EMBM

ELECTROMAGNETIC BATTLE MANAGEMENT



User Experience

Digital Planning

Integrated Force Interoperability

EMS Deconfliction Analysis and Monitoring

EMS Visualisation

EMS Situational Awareness

Dominate the Electromagnetic Spectrum

Electromagnetic Battle Management (EMBM), developed by Consunet, is a modern software solution to the military planning process. EMBM provides the warfighter with the tools to plan, simulate, execute, monitor and evaluate Electromagnetic Spectrum (EMS) usage and manoeuvre within the Electromagnetic Operating Environment (EMOE), offering a critical edge in Electronic Warfare (EW).

In modern warfare, militaries depend on the EMOE for Command and Control (C2) of forces. The EMS as a critical resource, determines the outcome of military engagements and Commanders must enable their forces' freedom of manoeuvre within the EMOE, while denying the same to the enemy. As the EMS becomes increasingly contested and congested, the need for integrated planning has never been greater.

The individual forces currently use separate battle management tools and processes which are isolated and disconnected from a joint environment. Using common messaging standards to interface with land, sea, air and space battle management systems, EMBM integrates EW management across the joint force, providing a single, EW common operating picture to achieve a level of EMS superiority.

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Key Features

User Experience
EMBM provides an intuitive user interface and experience, featuring geospatial visualisation of forces, military 2525D symbology, EMS radio frequency simulation, modelling and deconfliction. These elements replace outdated traditional paper methods, dramatically reducing planning time from months—to hours and minutes, enhancing decision-making efficiency.

Mission Planning
EMBM streamlines course of action development and analysis in line with the doctrinal Joint Military Appreciation Process (JMAP). Scenario development and time-based phasing enables the warfighter to undertake operational and strategic planning activities.

Integrated Force Interoperability
EMBM seamlessly integrates data from various force levels and government agencies, including military mission data, EMS data, geospatial data, and Defence infrastructure data, among others, delivering a unified operational picture and military planning tool to achieve decision advantage.

EMS Deconfliction Analysis and Monitoring
EMBM features automatic detection and notification of overlapping frequency allocations through an EMS spectral display, to enable clear communication channels and prevent interference, providing advanced EMS deconfliction.

EMS Visualisation
Using geographic information system data and advanced radio frequency propagation models, EMBM visualises EMS effects spatially to enable decisions regarding spectrum impact, informing spectrum and spatial manoeuvre.

EMS Situational Awareness
The EMS is contested, congested and constrained, increasing the likelihood of unintended planning consequences. EMBM enhances EMS situational awareness, aiding Commanders in limiting adverse military effects.

Capabilities

Sovereign Capability for the Information Age
Delivered by Consunet, a 100% Australian enterprise, EMBM is a sovereign capability supported by an Information Age Capability Factory that can rapidly respond to customer needs. Consunet's highly experienced and skilled workforce combines governance, cloud native frameworks, industry-leading DevSecOps tools and agile best practices to provide state-of-the-art, holistic sovereign solutions for the information age.

Secure, Trusted and Operational Software
EMBM is a certified high-assurance capability currently in service and deployed operationally. EMBM has been designed with security at the forefront. Consunet's agile secure software development methodology enables the system with a Continuous Authority to Operate.

Innovation and Extensibility
Built using modern and industry best practices based upon cloud native technologies and supported by a zero-trust architecture of modular microservices, EMBM is extensible, enabling system components to be added or removed to adapt to changing requirements, new technologies or business processes, without replacing the entire system. Extensibility enables continuous exploration of new technologies and ideas, fostering a culture of innovation within organisations.

Future Applications
As a strategic and operational planning tool, EMBM provides benefits and opportunities for both military and non-military organisations. Underpinned by Consunet's Cloud Native Software Framework, EMBM can be tailored and extended to integrate data of all forms, and made available through a common user interface.