The Program will enable superior levels of command and control through improved battlespace situation awareness; relevant and timely intelligence and information products; innovative Electromagnetic Spectrum (EMS) tools which encompasses Electronic Warfare (EW) capabilities; and communication and information management systems.

* + 1. Sense – Measures the EMS, which is required to manage, navigate, shape and manipulate the EMS. In the Program construct, the sense function represents not only the core (EMS) measurement function but also the fusion of data across an integrated sensor network (being platform, task group, joint force).
    2. Analyse – Takes the output from the Sense function and integrates it with additional information (i.e, Radar tracks, geographical location, etc) and provides an integrated situation awareness picture (with a strong EMS bias). Under the Program it is anticipated that this function is almost entirely automated. This function includes pre and post mission data analysis activity.
    3. Effect – Represents the ‘active’ electronic attack capability that the Program ultimately delivers. Under this model the effect function includes all actions that the entity may perform in order to manage and/or manipulate the Electromagnetic Environment. This includes the switching off or re-configuration of systems, active management of signatures (both active and passive), passive countermeasures (flares and chaff) and active emissions and/or electronic attack.
    4. Command / Control and Co-ordinate – Underpins the timely delivery of capability effect in a co-ordinated and controlled manner. Activities performed by this function include EMS battle management, situation understanding and co-ordination of passive and active effects. These activities are scalable across the platform, task group and joint force operations.
  1. To support delivery of the Program the following key elements have been identified:
     1. Focus on capabilities in:
        1. Enabling technologies (antenna, signal processing, high power amplifiers, integrated circuits, etc)
        2. Enabling passive decoy and signature management systems,
        3. EO/IR/UV systems to counter EMS in visible, IR or near UV ranges.
     2. Dynamic Response Co-ordination. Equipment and infrastructure that support the operation of multiple products/processes autonomously in an integrated and co-ordinated manner. This function will utilise machine learning and / or artificial intelligence in support of algorithmic warfare (pattern recognition, data mining, and decision assistance tools, deep learning). Identified functions include:
        1. Planning Tools (and products) that can be used at the strategic (planning) and tactical (operation),
        2. Electromagnetic Battle Management, tools, systems, algorithms that support co- ordinated operations with defined and limited resources.
        3. System / Effector Co-ordination, command, control and co-ordination systems that support the control and integration of multiple concurrent processes to deliver required mission outcome.
     3. Training. Specialised training in the operation or maintenance of EW products. The method of training is also critical in Defence’s understanding of applicability for a future force. Training in the operational art of EW (techniques and theory) will be considered separately.
     4. Modelling and Simulation. The use of a synthetic environment to analyse or assess inputs, actions or effects; or to support mission planning and pre-mission training. May include machine learning or artificial intelligence. Primarily within the research, analysis, training or development domains, but the application of these activities in an operational environment will also be considered.
     5. Mission Data Operational Support (MDOS) and Electronic Warfare Operational Support (EWOS). The infrastructure or products that enable the management of information or information products necessary for the operation of EW products in the operational environment. A traditional example is the generation and maintenance of libraries of known RF emitters.