



# LAND & EMERGENCY SERVICES PORTFOLIO 18/19



# LAND & EMERGENCY SERVICES

KEY CLIENTS - AUSTRALIAN DEFENCE FORCE | THALES | ELBIT SYSTEMS | RHEINMETALL MAN MILITARY VEHICLES AUSTRALIA



## AUSTRALIA & NEW ZEALAND



Nova Systems has been involved with a large number of contemporary Defence projects in the requirements, acquisition and sustainment phases of the capability lifecycle. We have had continuous involvement in the Land Environment since 2004, both in supporting the operational and technical organisations in acquiring and sustaining effective capabilities. This has resulted from Nova's absolute commitment to the Commonwealth in realising goals that protect and enable our war fighters. Nova Systems holds the same commitment to Army and for all Land activities.

Nova recognises the Land Force is continuing to become increasingly integrated and complex as it continues to adopt new technologies and capabilities to achieve the Adaptive Army initiative. To enable our clients to meet these challenges, Nova Systems draws upon its strong heritage in supporting defence, defence industries and complex systems engineering. Coupling our land domain expertise with our capabilities and experience in aerospace and maritime complex system acquisition, enables us to bring a unique and holistic view of the way complex systems interact and provide leading edge support to Land projects.

Our people combine operating experience with highly developed system engineering skills, to enable our clients to gain the most value from their assets across the whole life-cycle. We work as part of integrated project teams to reliably and consistently develop and deliver projects on time, within budget and to required level of quality. We have a strong focus on early stakeholder engagement and achieving high client service standards. Importantly it is the ongoing relationship with industry that remains a key focus of Nova's Land program.

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## LAND & EMERGENCY SERVICES

The nature of modern warfare has changed rapidly and significantly, but the one constant requirement that remains is the need for troops to take and hold ground. As threats evolve rapidly and security situations become more complex, the troops will require better protection, technology enablers that will allow them to identify threats and apply firepower rapidly, and command and control systems that will create the pervasive battlespace awareness needed to dominate the battlefield. An intimate understanding of the operational environment is crucial to delivering capabilities that can withstand the rigours of modern land combat.

In support of the Emergency Services there are clear synergies with the Land environment. The need for personnel to be able to respond to events as they evolve rapidly and security situations become more complex, personnel will require better protection, technology enablers that will allow them to evaluate situations and apply support rapidly, and command and control systems that will create the pervasive situational awareness needed to resolve the incident efficiently. An intimate understanding of the operational environment is crucial to delivering capabilities that can withstand the rigours of modern day emergency situations.

Nova Systems provides the operational and engineering solutions to help our customers meet these challenges. Our people understands the nexus between operations and engineering, and with our presence in Australasia, Asia and Europe, we are in a unique position to use our global experience and expertise to bring a fresh perspective into the problem space when designing creative solutions for our customers.

Our people combine technical skills with an in-depth understanding of what is required to deliver and sustain capability. We provide scalable solutions whether it is specialist advice or a full turn-key service, working with OEMs and the end users to deliver capabilities tailored to their needs.

[CONTACT](#)



## CAPABILITIES

- Operational Test and Evaluation
- Development Test and Evaluation
- Systems Engineering
- Systems Integration
- Systems-of-Systems Integration
- Design Engineering
- Modelling and Simulation
- Electronic Warfare
- Explosive Ordnance
- Communications and Datalinks
- Unmanned Systems
- Integrated Logistics Support
- Project Management

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## GOLDIE OPERATIONAL EVALUATION IMPROVISED EXPLOSIVE DEVICE (IED)



### Highlights

GOLDIE is a hand-held Improvised Explosive Device (IED) detector developed outside of Australia. To minimise incidents and casualties to ADF personnel caused by IEDs, Headquarters Joint Operations Command (HQJOC) and the Counter IED Task Force (CIEF TF) wished to trial the detector under Australian conditions and to assess its suitability for use in Australia's operational areas.

Nova Systems was engaged to manage and conduct an evaluation of the detector under operational conditions, to assess its effectiveness in detecting IEDs; and to inform a decision to procure a number of detectors for Army use. In preparation for the evaluation and potential procurement, Nova Systems prepared logistics support documentation (operating manuals, training materials and security instructions) and a trials plan.

## PROTECTED MOBILITY VEHICLE-LIGHT (PMV-L) CAPABILITY DEVELOPMENT SUPPORT



### Highlights

The Australian Army is in the process of acquiring a new Protected Mobility Vehicle-Light (PMV-L) capability. The PMV-L provides a vehicle that offers superior protections for the occupants while still providing an outstanding level of mobility and light enough to be transported under a helicopter.

The Australian Army has gone through an extensive evaluation process and the Hawkei vehicle offered by Thales Australia was selected over a number of competing vehicles. Under the current stage of the project the Hawkei vehicle will be further developed and subject to a rigorous test and evaluation program.

Nova Systems is contracted by Thales Australia to design and assist with the test and evaluation program to be conducted by the Australian Army.



**KEY EXPERIENC**

## HAWKEI PROTECTED MOBILITY VEHICLE DEVELOPMENTAL TEST AND EVALUATION



**Highlights** Nova Systems planned and managed the execution of the DT&E in consultation with the CASG (Capability Acquisition Support Group) Project Office and the Land Engineering Agency. The DT&E was a comprehensive evaluation of the Hawkei vehicle including such characteristics as mobility, deployability, survivability, reliability, payload capability, weapon systems integration and human factors. The human factors element included an assessment of the vehicle in the operational environment as well as key elements of MIL-STD-1472F. The MIL-STD-1472F element included detailed assessment of the vehicle and operator interface. This was conducted in light of various anthropometric standards including DEF-STAN-00-250.

The BMS integrated platforms successfully achieved Design Acceptance and Certification. Elbit Systems and DMO were especially impressed with the BMS model developed to verify Electronic Environmental Effects (E3) saving over 800 planned hours in an E3 chamber.

## BATTLE MANAGEMENT SYSTEM VERIFICATION AND VALIDATION SUPPORT



**Highlights** Nova Systems was contracted by Elbit Systems to execute the Battle Management System (BMS) Verification and Validation (V&V) program to network the Australian Army Command and Control capability. This was Elbit Systems first major programme in Australia and required a highly capable partner to ensure they verified all of the Army's requirements.

Nova Systems planned managed and executed Elbit Systems' Acceptance Test and Evaluation (AT&E) programme in consultation with CASG (Capability Acquisition Support Group) Project Office and the Land Engineering Agency. The AT&E program was a comprehensive verification of the BMS mounted system installed on six vehicle types and two dismounted systems requirements including communication, networking, application, interoperability, environmental, electrical, structural and human factors.

## MEDIUM AND HEAVY CAPABILITY VEHICLES (MHC) EMI/EMC SUPPORT



**Highlights** Nova Systems was contracted by Rheinmetall MAN Military Vehicles Australia (RMMVA) to provide EMC/EMI support to their Project Land 121 Phase 3B. Under Land 121 Phase 3B the Australian Defence Force (ADF) will acquire up to 2700 medium-weight, medium and heavy vehicles along with associated modules and trailers. The vehicle fleet will include both protected vehicles (for operational deployment and tactical training) and unprotected vehicles (primarily for tactical training). The new acquired fleet will replace the ADF's current fleet of Unimog, Mack and S-Liner trucks.

To date, Nova's support assisted two types of vehicles reaching the end of their respective AT&E phase, with the successful handover to ADF of the first batch of vehicles in early April.



**KEY EXPERIENC**

## ACCEPTANCE TEST & EVALUATION TRAINING LAND SYSTEMS DIVISION



**Highlights** Nova is committed to supporting the Commonwealth and, specifically, Land Systems Division (LSD) in the development of LSD and Army personnel through the delivery of highly relevant instructional courses. Nova is focused on providing independent, high quality outcomes for its Defence customers. We have in excess of 7 years of experience delivering the Acceptance Test & Evaluation (AT&E) and the Systems Safety Engineering (SSE) courses to its Defence clients, and in excess of 3 years in providing these instructional courses to LSD.

Nova is committed to provide this training through the delivery of highly relevant instructional courses and the transfer of Defence AT&E and SSE corporate knowledge from our very well qualified and experienced instructor personnel. Nova understands Defence's requirement to professionalise and develop their personnel and we deliver courses which will enable course attendees to become effective practitioners.

## EXPLOSIVE ORDNANCE SUPPORT EXPLOSIVE MATERIEL BRANCH



**Highlights** Nova is committed to assuring the safety and suitability for service of items of Explosive Ordnance (EO) (Non-Guided and Guided EO) in the Defence inventory as well as enabling integrated and effective weapon capability on military platforms. Since 2006 Nova Systems has continuously supported Explosive Materiel Branch in the introduction to service of new and upgraded items of guided and non-guided EO as well as a range of weapons integration tasks on land systems.

We have been involved with a large number of contemporary land projects in the requirements, acquisition and sustainment phases of the capability lifecycle. We have successfully supported the delivery of outcomes in the Project Management, Logistics and Engineering areas for Major Capital equipment weapons capabilities such as JDAM, JASSM, AMRAAM, JSOW, a range of 155mm systems, Hellfire and a range of medium and small calibre munition natures.





## ABOUT NOVA SYSTEMS

Nova Systems was formed in 2000, rapidly becoming one of the pre-eminent providers of specialist engineering services to the defence sector.

Today, Nova Systems employs more than 300 specialist consultants across Australia, New Zealand, the UK and Singapore, collaborating with its blue chip clients across industry sectors including utilities, government, aerospace, mining, oil, gas and rail.

We provide industry and government with world class, independent expertise. We work not just as consultants, but as trusted partners, as committed to your success as you are.

Our size and extensive network allows us to resource project teams tailored to specifically meet client needs and objectives, yet we remain nimble and flexible. We apply innovation and ingenuity, drawing on the talents and expertise of our people, applying cross-sector thinking, national as well as global perspectives and emerging best practice initiatives.

### Specialist services

- Commissioning and test
- Capability development and delivery
- Project development and delivery
- Specialist engineering design
- Certification and design approvals
- Operational and systems safety
- Asset management and logistics
- Training (registered RTO)

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