

Cohort plc

The independent technology group

Defence and security

Cohort is the parent company of four innovative, agile and responsive businesses providing a wide range of services and products for British, Portuguese and international customers in defence and related markets.



EID is a Portuguese high tech company with deep know-how and vast experience in the fields of electronics, tactical and naval communications, command, and control. The company focuses on the design, manufacture and supply of advanced, high performance equipment and systems, mainly for the worldwide defence community. EID is active globally, with customers in Europe, Africa, the Middle East, Asia Pacific and South America.



MASS is an electronic warfare operational support, cyber security, secure ICT networks, digital forensics and support to military operations business. MASS delivers tailored, integrated solutions that are critical to customers' ability to deliver effective operations. An intrinsic expertise in system engineering and project management enables MASS to deliver through-life capability in the form of high technology solutions, training and trusted managed services, underpinned by a contract research and development capability.



MCL is a supplier of advanced electronic communications, information systems and signals intelligence technology to the defence and security sectors. Working with partners, prime contractors and directly with the customer, MCL utilises an international network of specialist technology providers, combined with its own bespoke design, engineering and integration skills, to supply and support a diverse portfolio of C4IS and ISTAR capabilities.



SEA is a major supplier of applied research, technology development, systems integration, specialist electronic systems, engineering and software design services to the defence and security markets. Its engineering and project management skills include naval communications systems, maritime combat systems, through-life support, dismantled soldier systems, subsea engineering and traffic enforcement.

Maritime combat systems

Page 2

C4ISTAR

Page 3

Simulation and training

Page 4

Cyber security and secure networks

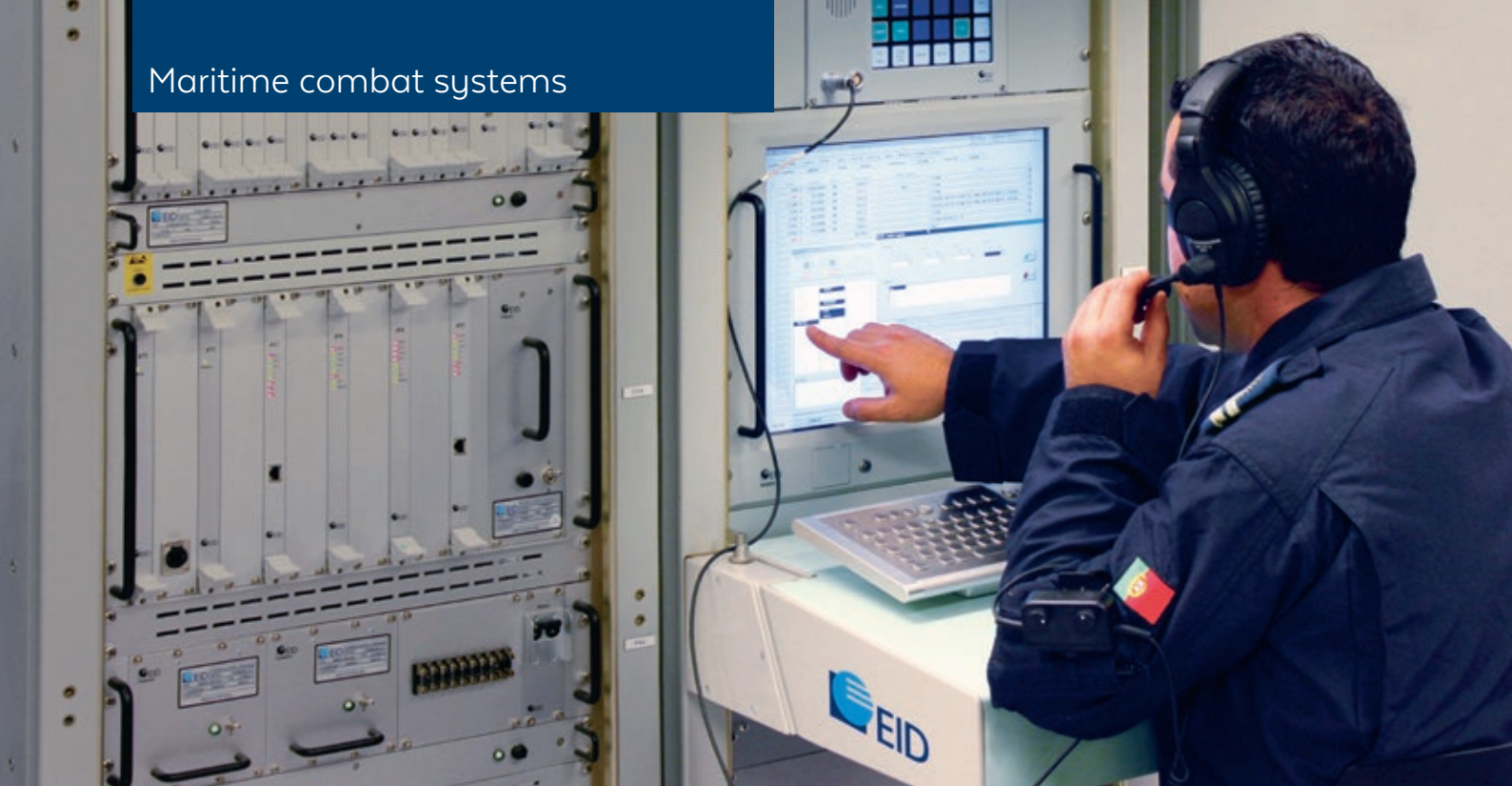
Page 5

Research, advice and support

Page 6

Products, systems and services

	EID	mass	MCL	sea
Ship and Submarine Communication Systems				
Combat System Data Networks				
Message Handling Systems				
Acoustic Arrays				
Hydrophones and Transducers				
Echosounders				
Portable Underwater Communications				
Torpedo, Acoustic Decoy and Sonobuoy Launcher Systems				
Weapons Handling Systems				
Tactical Radio and Intercom Systems				
Field Communications				
Military Message Handling Systems				
Specialist User Communications				
Military Hearing Protection				
Tactical Situational Awareness				
Small Unmanned Air Systems				
Counter UAV Systems				
Electronic Warfare Operational Support				
Electronic Warfare Data Management				
Countermeasures Development				
SIGINT Systems, ELINT and COMINT, and ESM				
Simulation Applications				
Procedural Training Solutions				
Virtual and Augmented Reality				
Electronic Warfare and Cyber Training				
Electronic Warfare COMINT Simulation				
Strategic Level Exercise Support				
Strategic Analysis and Education				
Information Assurance				
Cyber Essentials and GDPR Certification				
Digital Operations Centres				
Secure ICT Networks				
Classified Mission Networks				
Information Management Services				
Digital Forensics				
Contract Research and Development				
Research Management				
Technical Advice and Support				
Capability Development				
Soldier Systems				
Air Systems				
Human Factors & Ergonomics Services				



Naval communications

EID provides state-of-the-art, high performance Fully Integrated Information and Communications Systems, meeting the most stringent requirements of any type of warship. An Integrated Communications and Control System (ICCS) is the core sub-system that integrates the on-board communications equipment required to establish all external and internal communication channels. With a high degree of automation, ICCS has a modular and flexible architecture, capable of being tailored and configured to meet the communications requirements. It has been controlling communications on board over 150 warships from patrol boats and submarines to aircraft carriers.

EID's MOST4 Ships is an Automatic Message Handling System featuring a comprehensive set of facilities aimed at reducing the overheads of traditional on-board message management tasks. Message acquisition and transmission is performed automatically in accordance with NATO ACP127 formats.

SEA can supply a complete External Communications System (ECS) for ships and submarines. These include embedded network solutions that provide legacy, current and future equipment sub-system integration, configuration, control and monitoring. The common ECS is in service with the UK Royal Navy and will be fitted to all in-service and planned submarines. ECS is an open architecture, modular, reconfigurable system designed to meet the demanding requirements for external communications in the naval environment.

SEA also provides modern Combat System Data Networks using open architectures to meet the flexible demands of new combat system elements and overcome legacy equipment constraints.

Sonar systems

SEA offers a range of acoustic sensor products and services, from single sonar elements to entire systems, either as bespoke designs to suit specific customer requirements or standard off-the-shelf solutions. SEA has unrivalled experience and expertise in the provision of support for sonar systems including evaluation and advice, modular processing suites, acoustic and environmental modelling services, full sonar system solutions, and tailored through-life support.

Backed by a wide range of transducer engineering skills and manufacturing capabilities, SEA offers proprietary sonar transducer products, from single elements to entire arrays, bespoke design to technology insertion.

KraitArray™ is a product family of sensitive, low profile, miniaturised acoustic arrays. Together with beam-forming software and operator consoles, KraitArray™ can be deployed by light naval vessels such as OPVs or corvettes. This provides customers with a credible and effective ASW capability without a requirement for large numbers of blue-water combatants.

SEA's next generation Echosounder is in service with the UK Royal Navy and other international navies. The Portable Underwater Communication System allows through-water communications between surface units, submarines, helicopters and divers, for use on trials and commissioning of Sonar Systems.

SEA also supplies a range of high quality integrated acoustic sensor products, including spherical, line-array, triplet-mounted hydrophones and multichannel arrays.

Launcher systems

SEA has 30 years of experience of supplying and supporting integrated Torpedo Launcher Systems (TLS) and is the sole supplier of lightweight TLS to the Royal Navy. TLS provide rapid launch of a range of weapon types, available in multiple launcher configurations to suit differing platforms and with an electronics suite of varying complexity, depending on configuration and operational requirement. They are designed to meet the requirements of ships varying in size from coastal patrol vessels to aircraft carriers. Launchers of acoustic decoys and sonobuoys are also available.

SEA also offers a proven Weapons Handling System for lightweight torpedoes, depth charges and air-launched missiles. It is designed for both the storage of weapons in the magazine and the transit of weapons to the launcher or helicopter.



Tactical communications

EID has a long tradition in developing, manufacturing and deploying tactical communication systems used extensively in combat scenarios and peacekeeping missions. Products available include combat net radios, personal radios, vehicle intercoms and ancillary equipment.

The PRC-525 multiband multimode software-defined radio is in use with the Portuguese and other armed forces. The TWH-100 series Personal Radios provide secure voice, data and shared situational awareness within squad teams and higher echelons for dismounted, vehicular, naval and amphibious operations.

EID has experience and know-how in vehicular communications engineering, providing suites for command vehicles, APCs, IFVs, artillery C2 vehicles, shelters and fast patrol boats. The ICC-201 and ICC-251 Digital Intercoms enable voice and data communication among crew members and externally over radio, copper or fibre cables.

EID's Field Communication Systems for deployed field headquarters enable local communication between telephones or data terminals and with remote users through CNR, analogue, ISDN and IP networks. A full range of solutions is offered to support the deployment of IP-based tactical networks, from simple wire to fibre Ethernet converters, to sophisticated and rugged servers, routers, switches, radio access points and radio-VoIP gateways.

The MOST4 MMHS provides complete military messaging support for strategic and tactical environments according to the prevailing NATO standards.

MCL designs and integrates bespoke and mission-specific tactical and deployable communication fits for specialist military users. MCL has a wide portfolio of radio communications equipment and ancillaries including V/UHF radios, antennas, multiband amplifiers, power supplies, vehicle interface kits, intercoms and headsets. A range of tactical headsets, PTTs and handsets are interoperable with all major radio and intercom systems. MCL is the major supplier of hearing protection to the UK MOD. Users include dismounted soldiers, specialist operators and aircrew. VAMP is a family of vented in-ear communications devices and helmet modification kits that can be used by aircrew as part of a dual layer hearing protection system.

Intelligence, surveillance and reconnaissance

MCL is partnered with a trusted international OEM supplier base to serve the UK market with COMINT, ELINT, Communications and Radar ESM solutions for the land, air and sea domains. These include man-portable SIGINT products in low power, lightweight and ruggedised form factors. The range of RF Intercept, DF and geolocation systems can rapidly detect and locate a wide range of threat signals, monitor signals of interest and support real-time analysis to provide mission-critical intelligence to the EW/SIGINT Operator.

MCL is a provider of small Unmanned Air Systems (UAS) and Counter UAS Systems. Together with its partners MCL are recognised industry leaders in RF signal exploitation and geolocation, offering SIGINT capabilities for a wide range of UAS.

Tactical situational awareness applications for dismounted soldier systems are also available from MCL.

Electronic warfare operational support

MASS is the UK's leading provider of independent EWOS training, products and services across air, land and sea. As a supplier to the MOD in support of the Defence EW Centre operations, the company provides EWOS to platforms on front-line operations. Customers are given the tools, support training and expert advice to develop and implement an effective sovereign EWOS capability.

MASS's EW Data Management System delivers coherent and consistent intelligence from the most sophisticated military platforms and sensor networks. The next generation system, THURBON®, provides the capability to manage, process and store complex platform, sensor and weapon system data to support intercept analysis, Electric Order of Battle production and mission planning.

Outside government departments, MASS is unique in its ability to offer a design and development service for platform protection tactics and countermeasures, advanced engagement models, and effectiveness evaluation using testing and trials. Customers are given technical assistance from domain knowledge experts with military and scientific backgrounds, or relevant training support to allow self-sufficiency. CounterWorx is a suite of products dedicated to countermeasures that supports the Threat Vulnerability Analysis and Countermeasure Development lifecycle.



Simulation applications

SEA has an excellent track record in developing advanced simulation applications that can be applied to derisk complex, expensive or hazardous engineering activities to improve operational safety and effectiveness. Rapidly deployable synthetic environments and equipment emulations are used for launch and recovery simulation in sub-surface, surface and ship/air maritime operations.

SEA has built up a toolkit of re-usable simulation components over many years, providing solutions to numerous projects. The Common Simulation Framework is in service with the UK MOD. A toolset has been developed consisting of high fidelity, physics-based, reconfigurable simulation components, which are validated against real-world data to provide a greater level of confidence in their outputs.

The company is leading a research programme into the use of augmented reality technologies for improved decision support, training and other applications.

Procedural training solutions

The Procedural Training Infrastructure provided by SEA is a complete suite of management tools and a high fidelity synthetic environment that can be deployed rapidly. The Procedural Training Engine is a gaming environment repurposed to deliver safe, efficient and high fidelity immersive training. DECKsim is an immersive 3D environment for students of flight deck and land-based airfield operations.

Electronic warfare and cyber training

Customers can be assisted by MASS to establish their own EW training capability from infrastructure and training material design and development, through to simulation systems and scenario generation.

Conceived, owned and developed by MASS, COMETT® is an innovative solution for Communication Intelligence EW simulation. It delivers a realistic and effective training capability designed by specialists with experience of conducting SIGINT on military operations.

A comprehensive range of cyber training courses can also be delivered from foundation awareness to advanced levels, covering the highest, most up-to-date standards. Advice, guidance and support is given to help customers establish or improve policies and procedures. Courses are delivered either through e-learning or as live classes.

Support to exercises and operations

As a leading training provider, MASS has assisted the UK MOD, NATO and overseas military clients in developing, procuring and delivering training solutions. The company can assist in developing specific training objectives, designing a bespoke training event replicating the current real-world situation, generating key scenario information, and planning and organising the event. MASS has been the sole provider of exercise support to the UK's PJHQ and JFC since 1996, and delivers a wide range of support to international customers such as NATO and the National Defence College in Oman. MASS is an approved supplier for the FCO Conflict, Stability and Security Fund and has supported various government agencies' missions and events including the pre-exercise for the London 2012 Olympic Games.

MASS has also designed and facilitated strategic games and exercises for over ten years and offers bespoke training courses in strategic awareness, strategic crisis management and strategic crisis media response. Customers are offered specialist briefings, support to seminars, workshops and analytical projects, contract research and analysis, and strategic and policy level decision-making exercises.



Information assurance

MASS works with organisations to identify vulnerabilities and to lock down ICT, providing effective security solutions without diminishing data accessibility for staff. Audit and review services can encompass both technical and procedural audits against recognised standards. Security Architects hold industry qualifications and are experienced in the design of highly secure architectures that meet the rigours of UK Government and defence assurance requirements. Risk Consultants carry out assessments based on qualitative or quantitative methods, develop risk tolerance criteria and define risk management strategies.

Cyber security

MASS' highly effective solutions protect data against cyber threats. The solutions can detect physical and geographic vulnerabilities, complex installations and supply chains, legacy infrastructure and obsolescence, real-time, safety critical and system availability restrictions, re-certification requirements prohibiting patch management, IOT and counterfeit technology issues. As a Cyber Essentials (CE) certification body, MASS helps organisations and their supply chains implement CE, the Government-backed cyber security certification scheme. A highly effective service can be provided, tailored to suit the client company size and the associated cyber risks. MASS is co-ordinator for the London Group of the Cyber Incident Sharing Partnership (CiSP), a community of businesses actively fighting the global cyber threat with the Government.

Secure networks

MASS delivers superior, tailored solutions that safeguard ICT infrastructure and data for customers who need continuous support of mission-critical applications and where security is paramount. A highly experienced team can be integrated into the organisation's own workforce, delivering 24/7 IT infrastructure management. CE, CE+ certifications, EU General Data Protection Regulation (GDPR) and IA consultancy services are available.

MASS is the only UK delivery partner for the IFS Enterprise Operational Intelligence solution (EOI). EOI provides organisations with a management cockpit, rather than a reporting dashboard, to map, monitor and manage their business. It links business strategy to tactics and operations in a single coherent solution, connecting process to performance throughout.

Digital forensics

MASS has been selected to deliver a digital forensics managed service to the Metropolitan Police Service in London. World-leading forensics capabilities are being brought together into a single end-to-end three-level managed service, placing operational capability into the hands of frontline investigators and increasing the capabilities of advanced users, culminating in improved efficiency and effectiveness. MASS provides a Digital Operations Centre for remote and on-site cyber security monitoring, cyber security analysis and protection, intelligence fusion and information exchange. Within the Digital Forensics umbrella, MASS delivers Non-Attributable Internet Connection Systems (NAICS), enabling the investigative team to conduct those enquiries without leaving a digital footprint.



Contract research and development

An industry authority in research and development (R&D), MASS works with leading academic partners to advance technology, improving the future effectiveness of defence and security operations and IT networks. MASS specialises in contract R&D, with specific skills in the development and integration of electronic and software systems, and a proven ability to execute technically challenging and complex projects. MASS laboratory facilities undertake classified R&D that is critical to national security and to the advancement of defence and security technology.

Research management

As well as conducting specialist research work in house, SEA acts as a research integrator, typically leading a mixed team comprising industry, specialist subject matter expertise and academia. Significant research contributions have been made to projects in Underwater Sensing, Radar ESM technology, Synthetic Aperture Radar, Human Factors Integration, Virtual Ship Synthetic Environments, Open Systems, Architecture and Dismounted Close Combat Sensors.

The ability to conduct research in these areas derives from a highly capable staff, a range of industrial partnerships and our many academic links. A highly credible independent systems engineering expertise underpins this, guaranteeing no conflicts of interest and ensuring all analysis or advice provided is bespoke to the customer.

Technical advice and support

SEA offers quality independent specialist technical advice and support to customers within the defence capability, acquisition and support areas. With a focus on land CIS, surface ship and submarine combat systems, imagery and geospatial systems, technical support is provided to the UK MOD, either directly or as part of a consortium. Electronic engineers, systems engineers, physicists, mathematicians and domain experts work together to provide essential technical and systems advice, and to derisk procurement strategies, from concept phase onwards.

The teams also assure prime contractor demonstration and build phase, technology refresh and capability update activities. SEA also provides Capability Development expertise across a wide range of defence disciplines, combining domain knowledge with technical understanding, whilst keeping up to date with the latest developments in technology and doctrine.

Soldier systems

SEA has established a pedigree in soldier systems research and experimentation as the lead industry partner for UK MOD research programmes since 2003. The company continues to develop technological advances to deliver high risk, high reward research through MOD funded programmes such as the Delivering Dismounted Effect, Future Soldier Vision, Weapon as a Platform, Helmet as a Platform and the Dismounted Situational Awareness CCD programmes.

Air systems

SEA has an enviable reputation for solving wide ranging air systems engineering challenges, particularly issues relating to all aspects of airworthiness in the post-Haddon-Cave era. Capabilities include Independent Technical Evaluation, ITEA, Certification and Qualification, Airworthiness and Safety Management, IKM and Logistics Solutions.

Human factors

SEA provides specialists in human performance, decision-making, organisational performance and safety in operational settings. Expertise is focused on the design and operation of dismounted soldier systems, military vehicles, naval ships, submarines and aircraft. Clients include the Defence Human Capability Science and Technology Centre.

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