

THE BEST THINKING IN DEFENCE

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SAGE GROUP AND DEFENCE

SAGE Group, A Tetra Tech Company, is a collective of specialist business units – SAGE Automation, Nukon, Skills Lab, and Embedded Expertise – delivering industrial digitalisation solutions across critical industries. As part of the Tetra Tech global network, SAGE Group accelerates digital journeys, to create a Smarter Future, Better World.

Each SAGE company has their own area of expertise, from capacity building, strategy and design to cutting-edge technological and digital solutions.

By supporting our clients to innovate, modernise, digitise and improve how they do things, we deliver significant gains across efficiency, safety, cost savings, quality and performance.

SAGE is vendor agnostic, which gives us the freedom to invest, innovate and approach every challenge for our clients without constraints.

Our national presence across Australia ensures delivery and on-going support is always within reach for our clients, no matter where they are.

Our work

Our industry experience and knowledge extend across many major defence companies, a reflection of our commitment to and participation in the sector.

SAGE's innovative approaches to various sectors ensures that our learnings from other sectors can be integrated into our defence project approach and delivery (while respecting our client's IP) to drive smarter performance.

To exceed the industry's rigorous demands, SAGE provide, and will continue to provide, trustworthy, secure solutions to support defence companies and supply chains.

SAGE Defence

Starting in 2009, SAGE Defence began with the signing of a Memorandum of Understanding with Navantia and has grown to become a significant sector within the business, with a track record of exceptional on-time and within budget delivery.

Across the SAGE Group of companies, we have proven to be a trusted partner in this sector, working alongside some of the biggest names in the defence industry.

Working extensively with tier 1 and tier 2 defence contractors, we can help you to fulfil Australian industry content requirements.

WHAT WE DO

MATERIAL AND SUSTAINMENT

SAGE Defence delivers fit-for-purpose electrical and control systems for the Army, Navy, and Air Force, from small stand-alone units to highly complex integrated solutions.

As an independent systems integrator, we tailor solutions to specific requirements using our proven approach and, where possible, incorporating commercial off-the-shelf (COTS) and/or military off-the-shelf (MOTS) components.

This ensures our solutions are appropriate, maintainable, and delivered on time with the flexibility and scalability to meet any Defence need.

WE DESIGN SOLUTIONS TAILORED TO EACH CLIENT'S SPECIFIC NEEDS

Design

SAGE Defence has a proven track record in delivering agile, innovative, and fit-for-purpose electrical and control systems that meet stringent Defence requirements for Defence Primes, OEMs, and SMEs.

We design solutions tailored to each client's specific needs, and we are unafraid to challenge requirements if a better option exists. Collaboration is central to our approach, working closely with clients to ensure the best outcomes.

Our designs are built for maintainability, supported by rigorous documentation processes that provide complete confidence in meeting compliance requirements.

Adhering to global best practice systems and processes, we apply a rigorous design methodology and a comprehensive testing regime to ensure every solution is robust, reliable, and ready for operational demands.

Source and deliver

With over 30 years' experience and robust supply chains, SAGE Defence leverages true vendor independence to source the most suitable components from around the world.

We select each part with precision to ensure your solution performs exactly as promised.

Through-life-support

SAGE delivers complete Through Life Support (TLS) for Defence assets, providing value at every stage of the lifecycle.

Our teams deploy wherever needed to perform fault-finding, repairs, and onboard upgrades, ensuring mission readiness and operational efficiency.

Our Through Life Support capability includes:

- URDEF works
- Warranty works
- Minor Capex works
- Preventative maintenance
- Compliance sign-off works
- Subsystem support works
- IPMS support works
- Platform training support
- Supply chain material sustainment contract.



WHAT WE DO

ESTATE AND INFRASTRUCTURE

SAGE keeps Defence assets running safely and efficiently, with reliability and performance front of mind.

Our national team brings deep experience across the defence estate and infrastructure—airfield lighting, standby power generation, fuel delivery, water treatment plants, and PFAS remediation.

You gain scalable resources, cross-sector expertise, and end-to-end capability—from design through to commissioning—with a proven track record of results.

Infrastructure works

Ensure project success with SAGE's end-to-end infrastructure expertise, encompassing:

- Detailed electrical design and power studies
- LV and HV reticulation
- PLC and SCADA programming
- Hazardous area design, functional safety
- Site installation and instrumentation commissioning.

YOU GAIN SCALABLE RESOURCES, CROSS-SECTOR EXPERTISE, AND END-TO-END CAPABILITY

Empowering defence capability through training

As part of SAGE Group, Skills Lab delivers targeted upskilling solutions for operators across the Defence sector. Our offerings include both **accredited and non-accredited training programs**, designed to build critical capabilities in areas such as **cyber security and leadership**.

Key programs include:

- **Cyber Security Leadership Program**
- **Defence Industry Leadership Program** – delivered in collaboration with the Defence Teaming Centre (DTC)
- **Customised Training Solutions** – tailored to meet specific operational and strategic needs.

Skills Lab is committed to supporting Defence workforce readiness through practical, industry-aligned education.

Service delivery

At SAGE, our collaborative approach is built around delivering **ongoing support, peace of mind, and exceptional asset performance** for our clients.

For the Defence sector, our services include:

- **Predictive Maintenance** – reducing downtime through data-driven insights
- **Instrumentation Services** – ensuring precision and reliability in critical systems
- **24/7 Breakdown and Remote Support** – rapid response when it matters most
- **Critical Function Testing** – validating performance under demanding conditions
- **Hazardous Area Inspections** – maintaining safety and compliance in high-risk environments

Partnering with SAGE means aligning with a company that's ready to lead you into the future of Defence capability.

WHAT WE DO

INDUSTRIAL CONTROL PANEL MANUFACTURING

SAGE Automation is a trusted advisor to the Defence manufacturing sector, delivering advanced automation solutions that help manufacturers:

- Reduce production costs
- Enhance product quality and consistency
- Improve operational safety.

With a proven track record across Defence and industrial environments, SAGE empowers manufacturers to optimise performance and remain competitive in a rapidly evolving landscape.



Why SAGE manufacturing?

With over 30 years of experience in the manufacturing sector, SAGE brings the expertise required to meet the **high-quality standards demanded by the Defence industry**. Our **Australian-based manufacturing centre** is equipped with advanced Industry 4.0 technologies, ensuring **precision, repeatability, and high throughput** for every project.

At SAGE, we go beyond simply building to your supplied drawings. We offer **expert recommendations for design improvements**, helping to enhance quality, reduce build time, and identify potential errors early. Our team ensures that any changes align with your specifications and operational requirements.

In recognition of our commitment to excellence, SAGE was named **Defence Manufacturer of the Year at the 2020 Australian Defence Industry Awards**.

OUR DIFFERENCE

Industry 4.0 initiatives

SAGE work cell tools, CNC machine and automated cut-to-length, strip and crimp machine ensure consistent quality terminations of our cabling.

Investments in our Industry 4.0 capability have enabled us to integrate digital twin technologies for easier customer sign-off and streamlined production workflows.

Certifications

Our panel technicians and apprentices are certified in IPC/WHMA-A-620A Requirements and Acceptance for Cable and Wire Harness Assemblies, a requirement for control system work in the Defence industry.

Transparency in processes

Initial internal meetings are held to review drawings, build materials and standards.

Progress reports and photos are provided to the customer, and we keep as-built records of each panel we build, including photos and scanned drawings for traceability. This ensures quick, accurate turnaround times for replica builds.

Comprehensive testing

Detailed Factory Acceptance Testing (FAT) is carried out as standard prior to shipping and installation.

This confirms a panel's functional operation before onsite installation and minimises the commissioning and testing time. It also provides our customers with an excellent opportunity to assess the functionality of the detailed test documentation.



WHAT WE DO

LOW VOLTAGE SWITCHBOARDS

SAGE is one of the few manufacturers in Australia capable of delivering custom-built, Design and Routine Verified modular switchboard systems that meet all compliance and performance requirements.

Our end-to-end solutions are designed to support complex Defence applications with reliability, safety, and precision.

We provide solutions compliant to both the AS/NZS and IEC versions of the 61439 series of standards.

CERTIFICATIONS

SAGE Automation performs all electrical installation work in full compliance with AS/NZS 3000:2018 – Electrical Installations (Wiring Rules). Our electrical panels are built to meet the rigorous requirements of AS/NZS 61439 – Low-Voltage Switchgear and Controlgear Assemblies.

All work is governed by SAGE Automation's Integrated Management System, which is certified to the following international and Australian standards:

- ISO 9001 – Quality Management
- ISO 14001 – Environmental Management
- ISO 27001 – Information Security Management
- ISO 45001 – Occupational Health & Safety
- AS/NZS 4801 – Health and Safety Management

This commitment to compliance and quality ensures every project is delivered with **safety, reliability, and performance** at its core.



DRAW ON OUR PROVEN EXPERIENCE

SAGE specialises in the design and manufacture of a wide range of electrical switchgear and control-gear assemblies, both modular and custom-fabricated.

Our capabilities include:

- Main switchboards
- Motor control centres
- Distribution boards
- Pump control boards
- Mechanical services switchboards
- Automation and control panels
- Power factor and Harmonic distortion correction systems.

Precision fabrication and certified assembly

SAGE LV Manufacturing produces **custom-fabricated enclosures** in a range of materials including **sheet steel, aluminium, and stainless steel**, tailored to meet the specific needs of Defence and industrial applications.

We are a **licensed assembler** of leading modular switchboard systems, including:

- Eaton Xenergy
- Elsteel
- Tabula
- Cubic
- ABB Pro E
- Rittal Ri4Power
- B&R Signature

Our commitment to quality means we get it right the first time—delivering **safe, functional, and cost-effective switchboard systems** that meet the highest standards of performance and reliability.



SAGE Defence has a proven track record in supporting global defence companies delivering projects and services.

OUR WORK IN THE DEFENCE INDUSTRY

With more than a decade of defence experience, we are a trusted partner who has worked alongside some of the biggest names in the industry.

BAE Systems

Thales

ASC (Australian Submarine Corporation)

Navantia

Saab Australia

Ultra Electronics

NSM

Tiwi Partners

Intract

Augility

Aurecon

Spotless

Ventia

Brookfield

Sitzler

McMahon

PACM

Lend Lease

Laing O'Rourke

Fulton Hogan

Avionics Limited

ADB Safegate

Daronmont

Hitachi

CASE STUDIES

MANUFACTURE OF MODULAR SWITCHBOARDS, BAE SYSTEMS AUSTRALIA

SAGE collaborated with sub-contractors and our client, BAE Systems Australia, to design, manufacture and commission cubic modular switchboards for four Royal Australian Navy (RAN) Paluma-class vessels.

Works included the design and manufacture of main switchboards and engine control, factory acceptance testing (FAT), Performance Monitoring System upgrades, onboard commissioning support.



CASE STUDIES

FUEL FARM UPGRADE, DARWIN RAAF BASE

SAGE was engaged to deliver a complex control system upgrade for Darwin RAAF base’s fuel system, the infrastructure that stores and pumps millions of litres of aviation fuel.

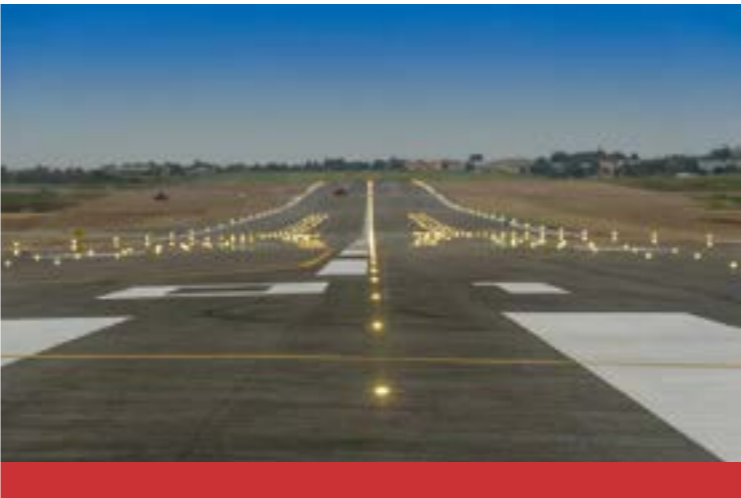
SAGE delivered SCADA system design, manufacture of electrical panels, operator training, installation and commissioning. SAGE Group company, Skills Lab, developed RAAF operator training on the new fuel systems, including an online training portal that can be used by new operators to learn the system.



TRAINING CONSOLE MANUFACTURE, SAAB AUSTRALIA

SAGE Automation’s manufacturing facility in Tonsley recently completed a major project for Saab Australia, assembling more than 50 training consoles that will be used by the Royal Australian Navy.

Works included the manufacture of internal cabling assemblies, project collaboration, manufacturing to scale, factory acceptance testing.



AIRFIELD LIGHTING UPGRADE, RAAF

SAGE Automation has helped to light the way home for pilots in the Royal Australian Air Force, by upgrading the runway lighting systems across key airfields around Australia.

The works included augmentation of the existing supply/ control system located within the existing Airfield Lighting Equipment Room (ALER Centre), PLC and SCADA programming, creation of operations and maintenance documentation, and commissioning.

COLLINS CLASS CHILLED WATER PLC REPLACEMENT, ASC

SAGE Automation specialist engineers worked with ASC to replace the PLC for the Chilled Water System, onboard six operational submarines.

Work included the integration of new equipment into existing field cabling and devices, electrical and functional design specifications and stringent functional testing.



SUBSTATION AUTOMATION FOR DEFENCE SOLAR FARMS

SAGE was contracted to augment the defence HV networks and control systems to support two solar farms for defence sites in the Northern Territory.

Works included the installation of new HV switchboards for PV connections, installation and commissioning of a new site-wide fibre optic network and modification of existing SCADA systems.



PROJECT EXPERIENCE

A snapshot of projects that SAGE Defence have undertaken:

ASC	Collins Class, Chilled Water PLC replacement
ASC	Collins Class, Cool/cold room control system upgrade
ASC	Collins Class, ISCMMS stay safe control system upgrade
BAE Systems Australia	Paluma Class PMS upgrade
BAE Systems Australia	HMAS Paluma PMS control system upgrade
BAE Systems Australia	LHD, communication enclosures
BAE Systems Australia	LHD, Zone 8 set to work & commissioning support for the Integrated Platform Management System (IPMS)
BAE Systems Australia	Wedgetail, ground support power distribution system
Chemring	Managing contractor, automated Countermeasure Manufacturing Plant
Cold Logic	HMAS Choules chiller upgrade
Daronmont Technologies	Mechanical / electrical fit out of portable Mobile Control and Reporting Centres (MCRC)
HMAS Sirius	Sewage treatment plant control upgrade
Intract	RAAF Darwin & Robertson Barracks PV solar HV augmentation
Navantia	AOR IPMS control panel build
Navantia	AWD, IPMS control panels construction and simulator installation / integration
Navantia	LHD, set to work and commissioning support for the IPMS
RAAF	Airfield lighting systems for 10 airbases
RAN	PLC training delivered specific to Hobart Class Air Warfare Destroyers
Saab Australia	Manufacture of training consoles
Saab Australia	Manufacture of server racks
Saab Australia	Manufacture of modular multi-function consoles
Thales	Mulwala high explosive facility control upgrade
Tiwi Partners	RAAF Darwin fuel SCADA controls upgrade
Ultra Electronics	AWD, control panels for the integrated Sonar System
Ultra Electronics	Power Distribution Unit (PDU)

WORKING WITH SAGE GROUP

SAGE Group is comprised of specialist business units who combine their expertise to support the defence industry to lead into the future.



Australia’s largest industrial automation and control system integrator, with end-to-end project delivery, advanced manufacturing and 24/7 breakdown and service support.



An Internet of Things (IoT) and digital transformation consultancy and delivery specialist. Nukon combines strategy, analysis and best-of-breed technology to provide improved visibility of operations and industrial processes.



Creating a workforce that thinks smarter, Skills Lab offers industry-derived training for individuals and defence organisations. Upskill your workforce through accredited and non-accredited Industry 4.0 courses in automation, instrumentation, PLC and SCADA.



Embedded Expertise provide advanced solutions for hiring industry specialists, with a unique approach to sourcing and selecting talent. Embedded makes it easy to access high-calibre technical engineering expertise for your project to succeed.

Tetra Tech has acquired SAGE Group.

About SAGE Group

SAGE Group comprises of four specialist offerings, SAGE Automation, Nukon, Embedded Expertise and Skills Lab. With an extensive footprint across Australia and India, employing a team of 800 talented people, SAGE is an integrated industrial digitalisation services provider with a suite of solutions designed to support clients to accelerate their digital journey.

SAGE partners with clients across the water, defence, energy, manufacturing, resources and transport sectors, to create a **Smarter Future, Better World.**

About Tetra Tech

Tetra Tech is the leader in water, environment and sustainable infrastructure, providing high-end consulting and engineering services for projects worldwide. With 30,000 employees working together, Tetra Tech provides clear solutions to complex problems by *Leading with Science®* to address the entire water cycle, protect and restore the environment, design sustainable and resilient infrastructure, and support the clean energy transition.

SMARTER FUTURE. BETTER WORLD.

SAGE is a proven, trusted and reliable defence sub-contractor.

**We'd love to
hear from you.**



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