

DEFENCE AND SECURITY

Engineering **SERVICES**

The CAPABILITIES



ENGINEERING SERVICES FOR R&D

Engineering expertise to turn operational needs into validated concepts and prototypes. Includes system studies, architecture, modelling, simulation, design, integration and test planning. Supports technology maturation and risk reduction across sensors, effectors and platforms. Deliverables range from demonstrators to qualification-ready designs.



ENGINEERING SERVICES FOR INDUSTRIALISATION

Services that transform a validated design into a robust, repeatable and cost-controlled production process. Includes Design for Manufacturing/ Design for Assembly, tooling and test benches, process definition, quality plans, configuration management and supplier industrial set-up. Solutions target ramp-up readiness, yield improvement and compliance with standards. The focus is on securing schedule, cost and product consistency.



ENGINEERING SERVICES FOR INTEGRATED LOGISTIC SUPPORT

Engineering that ensures systems remain available, maintainable and affordable throughout their lifecycle. Includes RAM-T/LCC analyses, maintenance concepts, spare parts and obsolescence management, technical documentation and training packages. Also covers supportability design, sustainment planning and data management. The objective is to optimise readiness while controlling total cost of ownership.



ENGINEERING SOLUTIONS & TOOLS






Software solutions supporting the design, analysis and optimization of complex systems. This includes CAD/CAE tools, modelling and data-driven engineering environments. Solutions enable faster iterations, performance validation and risk reduction from early design stages. The focus is on integration, accuracy and efficient collaboration across engineering teams.



STRATEGIC STUDIES & DECISION SUPPORT

Services supporting defence stakeholders through strategic analysis, market intelligence, operational assessments and technology foresight. These capabilities help organizations understand evolving requirements, assess competitive environments, identify opportunities and support investment, acquisition and capability development decisions.

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MEMBERSHIP
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AKKODIS

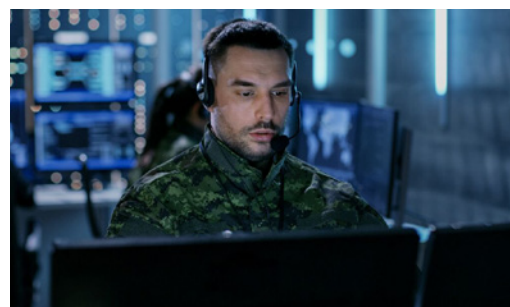
Akkodis supports clients in their digital transformation through consulting, solutions, recruitment, and training. With 40,000 experts across 30 countries, we combine advanced technologies, R&D, and deep industry knowledge to deliver integrated IT and engineering capabilities. We help organizations redesign processes, boost productivity, and accelerate time-to-market. In Defense & Security, we support critical systems design, integration, and cybersecurity, contributing to digital sovereignty through innovative, secure, and compliant solutions across the full lifecycle.



DRIVING PERFORMANCE THROUGH ADVANCED ILS CAPABILITIES



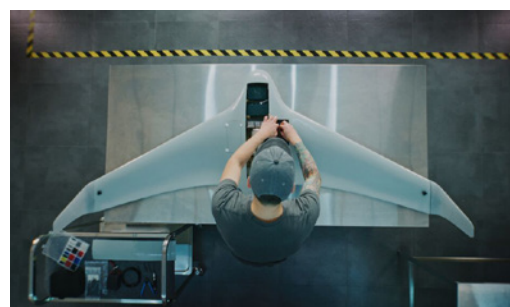
Akkodis offers advanced capabilities in Integrated Logistics Support (ILS), covering the entire system lifecycle—from data acquisition to maintenance engineering, including documentation and codification. Leveraging its expertise in international standards (S1000D, S2000M, S3000L), Akkodis ensures compliant and industrialized deliverables while supporting clients in the continuous improvement of their processes. Through its international network and investments in Data & AI, Akkodis positions itself as an innovation partner, driving performance and productivity gains across ILS activities.



SCALABLE AND SECURE INDUSTRIALIZATION FOR DEFENSE PROGRAMS



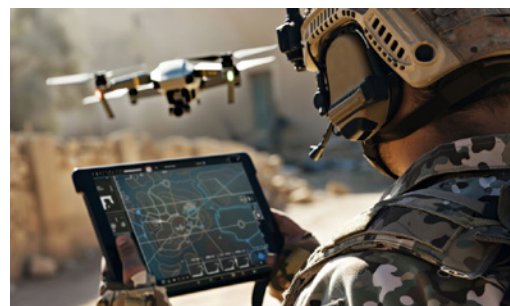
Akkodis delivers end-to-end industrialization capabilities for the defense sector, from concept and prototyping to large-scale, secure production. Leveraging global delivery centers, on/offshore models, and specialized engineering hubs, Akkodis ensures scalable, cost-efficient, and high-quality production. Its expertise spans complex systems engineering, testing, certification, and deployment in secure environments. With strong capabilities in data, AI, and digital continuity, Akkodis supports defense programs in accelerating industrial ramp-up while meeting stringent security, compliance, and sovereignty requirements.



ACCELERATING INNOVATION IN DEFENSE R&D ENGINEERING



Akkodis delivers advanced Engineering Services for R&D in the defense sector, supporting the development of innovative, mission-critical systems. Leveraging deep expertise in digital engineering, AI, data, and systems development, Akkodis provides end-to-end capabilities from concept and design to validation and integration. Our teams operate across complex environments, enabling rapid prototyping, secure architectures, and scalable solutions. By combining cutting-edge technologies with strong domain knowledge, Akkodis accelerates innovation and enhances operational performance for defense programs.



END-TO-END SUPPORT FOR DEFENSE SYSTEM DEVELOPMENT



Akkodis provides comprehensive support to the development of defense systems, leveraging its deep expertise in digital engineering, system integration, and multidisciplinary engineering services. Operating across the full system lifecycle, Akkodis supports defense stakeholders from early concept definition and requirements engineering to development, validation, industrialization, and operational deployment. Its capabilities are tailored to address the complexity, criticality, and sovereignty requirements of modern defense programs.



Akkodis mobilizes cross-functional teams combining system engineering, embedded software and hardware development, mechanical design, and project management. Its teams operate within complex environments governed by military standards and stringent security requirements, ensuring full compliance and traceability. The company supports a wide range of domains, including avionics, combat systems, communications, and electronic warfare, with strong capabilities in architecture design, system-of-systems integration, and interface management.

Throughout the development lifecycle, Akkodis applies rigorous engineering methodologies, including V-cycle development, model-based systems engineering (MBSE), and advanced testing and validation processes. Its expertise covers verification and validation (V&V), qualification, and certification activities, ensuring that systems meet operational, safety, and performance requirements. Akkodis also contributes to software and hardware integration, enabling seamless interaction between subsystems and ensuring mission-ready performance.

Akkodis enhances defense system development through advanced digital capabilities, including data and AI integration, DevSecOps practices, and modern software architectures. By leveraging digital platforms and intelligent tools, Akkodis supports faster development cycles, improved decision-making, and greater system resilience. Its approach integrates cybersecurity, data governance, and performance optimization from the earliest stages of development, ensuring secure and robust solutions.

In addition, Akkodis contributes to industrialization, manufacturing engineering, and in-service support, enabling continuity from design to deployment. Its capabilities extend to production readiness, quality assurance, supply chain support, and field engineering, ensuring that systems are not only designed effectively but also delivered and maintained efficiently. This end-to-end vision allows Akkodis to mitigate risks, optimize costs, and accelerate time-to-market for complex defense programs.

By combining engineering excellence, global delivery capabilities, and strong industry expertise, Akkodis acts as a trusted partner for defense organizations. It enables the development of high-performance, interoperable, and future-ready systems aligned with evolving operational needs and technological advancements. Through its integrated approach, Akkodis supports defense stakeholders in achieving operational superiority while maintaining the highest standards of safety, quality, and compliance.



AKKODIS

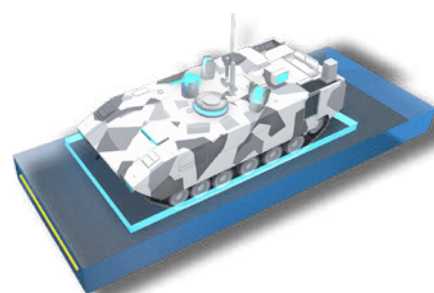
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POWERING DEFENSE THROUGH ADVANCED SIMULATION



Akkodis delivers advanced simulation software capabilities that help defense stakeholders design, test, validate, and optimize complex systems in secure and mission-critical environments. Its expertise spans system simulation, digital twins, software development, verification, and real-time modeling, enabling customers to assess operational concepts, reduce development risk, and improve overall system readiness before deployment.



Akkodis supports simulation activities across multiple engineering levels, from early concept studies to validation and integration. Its capabilities include simulation and verification under real-world conditions, logistics flow and process simulation, process emulation, digital twins, robotics simulation, and integration with broader industrial and engineering environments. These capabilities are backed by dedicated engineering resources and proprietary tool suites for verification and validation.

In the defense sector, Akkodis contributes to the development of software simulation environments for complex platforms and mission systems. Reference cases in the available materials include support for the development of a complex Loadmaster Control system simulation with cargo space mapping for training purposes, as well as the further development and integration of a system simulation used to evaluate operating concepts. The same references also highlight software development, testing, environmental qualification activities, and requirements management in DOORS, demonstrating Akkodis' ability to connect simulation software with validation, certification, and system engineering disciplines.

Akkodis also develops digital-twin-based approaches for autonomous and connected systems. Internal references explicitly mention a digital twin developed to simulate drone missions, as well as a digital twin platform used to validate algorithms through use cases involving autonomous vehicles and vulnerable road users. Additional projects show Akkodis developing software for robotic platforms, including localization, trajectory planning, control laws, fleet supervision, and simulation in Gazebo before deployment in representative environments.

For defense organizations, these capabilities translate into tangible value across the full lifecycle of critical systems: earlier validation of design choices, safer testing of operational scenarios, improved training realism, better assessment of performance in representative environments, and stronger preparation for integration and field deployment. Akkodis' simulation software approach is strengthened by complementary expertise in embedded software, data and AI, verification and validation, combat systems, acoustic recognition, and R&D on digital twins and AI systems.

By combining simulation, verification, digital engineering, and software integration, Akkodis provides defense customers with a robust framework to explore system behaviors, evaluate mission scenarios, and secure decision-making in increasingly complex operational contexts. This makes Akkodis a strong partner for accelerating innovation while maintaining the rigor, traceability, and performance expected in sovereign and high-consequence defense programs.



ALTELIOS TECHNOLOGY

ALTELIOS TECHNOLOGY is a French Company with more than 20 years of activities in Defense - mainly in land and aeronautic domains. ALTELIOS can provide expertise in operational safety and engineering services.

ALTELIOS TECHNOLOGY est une entreprise française active depuis plus de 20 ans dans la Défense - domaines terrestre et aeronautique. ALTELIOS possède une expertise en sûreté de fonctionnement et propose des prestations en ingénierie.



ENGINEERING / R&D



AlteliOS Technology is an expert in the fields of innovation, new technologies, for defense, transport and energy and operational safety.

Our employees contribute to the realization of exciting and innovative technological projects to anticipate the evolutions that will make the future.

We are based in France and Europe with our 4 Locations : Paris (head Quarter), Lyon, Marseille and Brussels.

Our Engineering/R&D team supports our customers in the design, development and manufacturing of products and mechanical systems.

Our expertise focuses on the following areas:

Mechanical Engineering and Industrialization

Electronic Engineering

Computer Engineering

Systemes Engineering

All this capabilities are available for our customers to strengthen their teams and help them to develop new capabilities and products



OPERATIONAL SAFETY STUDIES



Our office in Lyon is involved in activities related to Operational Safety and Support in the fields of electronics and mechanics.

We are committed to :

- Evaluate the predicted reliability of your equipment and the consequences of their failures.
- Verify the respect of safety objectives with respect to system or regulatory requirements.
- Optimize maintainability and control maintenance costs.
- Estimate the availability according to the applicable MTBF and MTTR.
- Integrated Logistic Support Analysis.
- Quality assurance and documentation support.

Our sectors of activity:

- Defense / Military

- Space

- Electronics / Telecom

- Transport, industries, Nuclear/Energy



ANSYS, PART OF SYNOPSIS

Ansys, part of Synopsys, enables innovators across industries to push boundaries by using the predictive power of simulation. Synopsys, Inc. (Nasdaq: SNPS) is the leader in engineering solutions from systems to silicon, enabling customers to rapidly innovate AI-powered products. We deliver industry-leading silicon design, IP, simulation and analysis solutions, and design services. We partner closely with our customers across a wide range of industries to maximize their R&D capability and productivity, powering innovation today that ignites the ingenuity of tomorrow. Learn more at www.ansys.com.

ANSYS SYSTEMS TOOL KIT (STK) - SOFTWARE FOR DIGITAL MISSION ENGINEERING AND SYSTEMS ANALYSIS



Ansys Systems Tool Kit (STK) provides a physics-based modeling environment for analyzing platforms and payloads in a realistic mission context.

Overview

With Systems Tool Kit (STK), you model complex systems inside a realistic and time-dynamic three-dimensional simulation that includes high-resolution terrain, imagery, RF environments, and more. Select, build, or import precise models of ground, sea, air, and space assets and combine them to represent existing or proposed systems. Simulate the entire system-of-systems in action, at any location and at any time, to gain a clear understanding of its behavior and mission performance.

Capabilities

Ansys STK enables you to create multidomain scenarios that extend simulation beyond systems to an interactive model of the operational environment. Ansys STK extends digital engineering to the mission — the operational environment in which your systems and systems of systems must succeed. Digital mission engineering should be applied early and often, from design through development, test, operations, and sustainment. Uncover problems sooner rather than later and you'll have a design that excels against your adversaries, ready to deploy far quicker than your competition.

Key Features

Ansys STK boasts an unrivaled collection of multidomain, physics-based analysis capabilities for the aerospace, defense, telecommunications, and other industries.



ANSYS AVXCELERATE SENSORS - SIMULATION SOLUTIONS FOR SENSOR TESTING AND VALIDATION



Ansys AVxcelerate provides accurate sensor simulation capabilities, enabling you to test your autonomous systems, including sensor perception, faster than relying only on actual driving or recorded data.

Overview

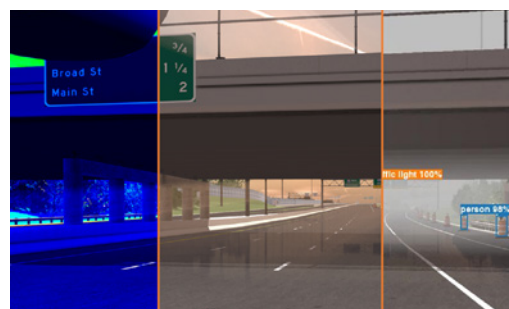
Ansys AVxcelerate Sensors enables to save testing time and cost while increasing perception performances for the camera, LiDAR, radar, and thermal camera sensors. Leveraging AVxcelerate's real time capabilities, perform virtual testing in Software-in-the-loop or Hardware-in-the-loop context following the progress of your design cycles.

Capabilities

Ansys AVxcelerate Sensors provides physically accurate sensor simulation for autonomous system testing with sensor perception in the loop. Save on testing time and cost while increasing perception performances for camera, lidar, radar and thermal sensors.

Key Features

AVxcelerate new release advances a systems-to-silicon approach with NVIDIA Omniverse digital twins, real-time Light Propagation Engine camera simulation, and visual radar tooling for precise sensor modeling.



ANSYS, PART OF SYNOPSIS

ANSYS SCADE ONE - MODEL BASED SOLUTION FOR THE DEVELOPMENT OF EMBEDDED SOFTWARE



Ansys, part of Synopsys, provides a model-based embedded software development and simulation environment with a built-in certified automatic code generator to accelerate embedded software development projects. System and software engineers use Ansys to graphically design, verify and automatically generate critical embedded applications with high dependability requirements. Ansys SCADE solutions are highly interoperable and can be easily integrated into existing development flows, optimizing development, and increasing communication among team members.



Overview

Ansys Scade One is a model-based solution for developing safe, reliable embedded software, reducing time and costs with an intuitive environment. It uses the Swan language for real-time reactive systems, supports early verification, and provides a complete open workflow from design to target integration, connecting with MBSE and requirements process.

Capabilities

Ansys Scade One is a model-based solution for the development of embedded applicative software, which enables a seamless Model-Based Systems Engineering (MBSE) process from the start.

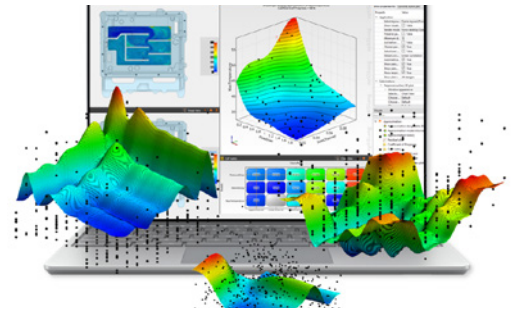
Key Features

The new release comes with Ansys Scade One, delivering more intuitive modeling, improved testing workflows, expanded connectivity options, and more efficient, configurable code generation for faster, higher-quality embedded software development.

ANSYS OPTISLANG - PROCESS INTEGRATION AND DESIGN OPTIMIZATION SOFTWARE



Ansys optiSLang enables you to orchestrate and automate your simulation toolchains and connect to state-of-the-art optimization algorithms to perform parametric design studies and better understand your designs.



Overview

Ansys optiSLang is a constantly evolving, leading-edge answer to the challenges posed by CAE-based Robust Design Optimization (RDO). Its state-of-the-art algorithms efficiently and automatically search for the most robust design configuration, eliminating the slow, manual process that used to define RDO. With optiSLang as your process integration and design optimization solution, you'll make the right decisions sooner.

Capabilities

Ansys optiSLang is a process integration and design optimization solution that automates key aspects of the robust design optimization process. optiSLang connects multiple CAx tools and different physics into a holistic, multi-disciplinary approach to optimization. Additionally, it enables simulation processes to be standardized and shared, giving new hires and simulation novices more direct access to simulation. With this powerful toolset, your entire team of engineers and designers can gain a better, more complete understanding of their design and make the right decisions sooner.

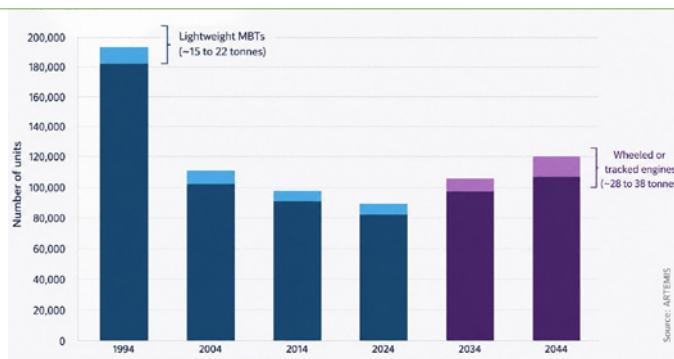


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ARTEM INFORMATION & STRATEGIES

ARTEM Information & Strategies supports defence and security stakeholders through tailored market intelligence and strategic analysis. Our services combine sector studies, equipment market assessments and competitive positioning analyses. We also develop training and awareness programmes dedicated to technological and operational issues and challenges. By combining intelligence methodologies with a deep understanding of defence and security markets, we deliver actionable insights for industry and institutions.



STRATEGIC STUDIES AND MARKET ANALYSIS FOR ARMoured COMBAT PLATFORMS AND LAND DEFENCE SYSTEMS

ARTEM Information & Strategies conducts strategic positioning studies for defence manufacturers, government institutions and professional organisations operating across the land systems sector. Our work covers main battle tanks, infantry fighting vehicles, armoured personnel carriers, tactical and protected mobility vehicles, artillery systems and their associated subsystems, including optronics, active protection systems, weapon stations, ammunition, communications, electronic warfare capabilities, robotics and unmanned systems.

Drawing on extensive experience acquired through numerous studies conducted for the French Ministry of the Armed Forces, the defence industry and the French land defence industry association (GICAT), including more than 57 sectoral studies on defence and security topics, we help clients understand market structures, competitive dynamics, technological trajectories and evolving operational requirements. Our analyses cover both mature and emerging markets across Europe, the Middle East, Asia-Pacific, Africa and the Americas.

Our positioning studies combine market intelligence, fleet assessments, capability analysis, industrial benchmarking and techno-operational expertise to identify competitive advantages, market opportunities and strategic differentiation factors. We analyse the evolution of armoured vehicle fleets, procurement plans, force modernisation programmes, budgetary trends, operational feedback from recent conflicts and the emergence of technologies likely to reshape future land combat systems.



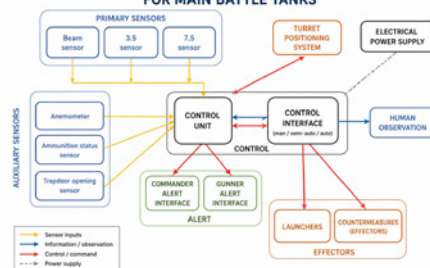
COMPARATIVE ANALYSIS AND BENCHMARKS

ARTEM also supports industrial clients in evaluating their positioning against competing solutions through comparative assessments of platforms, subsystems and technologies, identification of key differentiators, analysis of customer requirements and mapping of procurement priorities.

Supported by a network of recognised military officers, defence engineers, programme specialists, industry executives and academic experts, we provide decision-makers with actionable intelligence supporting export strategies, product development, partnership decisions, investment planning and long-term business development initiatives.

Over the past twodecades, ARTEM has developed and maintained proprietary databases covering global armoured vehicle fleets, procurement programmes, industrial capabilities and technology trends, enabling us to identify structural market evolutions, anticipate future requirements and assess the impact of emerging operational concepts on the land systems ecosystem. We have conducted more than 120 strategic, positioning, and sector-specific studies for specific clients in the French and European defense and security sectors.

FUNCTIONAL ANALYSIS OF AN ACTIVE PROTECTION SYSTEM FOR MAIN BATTLE TANKS



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Digital Engineering and Operational Transformation for Defense

For more than 55 years, CAPGEMINI has supported defense organizations and industrial leaders in their business and technological transformation. Combining expertise in engineering, digital technologies, data, AI, cybersecurity, and industrial operations, CAPGEMINI helps armed forces and defense industries enhance operational readiness, resilience, and industrial performance across the full lifecycle of mission-critical systems.

Leveraging deep knowledge of defense constraints and complex operational environments, CAPGEMINI delivers secure, scalable, and interoperable engineering services supporting both sustainment activities and industrial ramp-up programs for next-generation defense capabilities.

ACCELERATING DEFENSE PRODUCTION RAMP-UP THROUGH DIGITAL ENGINEERING AND SMART MANUFACTURING



CAPGEMINI supports defense manufacturers in transforming validated designs into robust, repeatable, and cost-efficient production systems for next-generation defense programs. Combining engineering expertise with Intelligent Industry capabilities, the Group helps optimize industrial performance from industrial planning to production ramp-up and operational deployment.

CAPGEMINI leverages digital continuity, model-based engineering, digital twins, industrial data platforms, and AI-driven analytics to improve collaboration, quality, traceability, and production efficiency across the industrial value chain. The Group also supports the deployment of Intelligent manufacturing environments integrating automation, connected systems, predictive quality, and real-time performance monitoring.

Through its expertise in industrial IoT, software-defined engineering, automation, and secure infrastructures, CAPGEMINI enables defense companies to improve ramp-up readiness, production resilience, compliance with standards, and cost and schedule control in demanding operational environments.



TRANSFORMING CORE ENGINEERING; HOW TO BE 30% FASTER, CUT 30% OF YOUR COSTS, AND STAY INNOVATIVE



Under pressure from hyper-volatile markets shaped by competitiveness or geopolitical tensions, defense engineering companies must become more agile and cost-effective while accelerating innovation without compromising the safety and reliability of their equipment. To address these challenges, CAPGEMINI believes in Engineering Factories, a next-generation approach to cooperation.

CAPGEMINI supports defense clients across the complete engineering development cycle of complex products. From ideation and prototyping to final validated detailed design, Engineering Factories offer an industrialized solution, ensuring ongoing cost control, quality, accelerated time-to-market and innovation, without compromising sovereignty, security, or operational excellence.

Whilst some critical activities must always stay in-house, we estimate that 80-90% could be safely industrialized and optimized externally. Many of these activities are still constrained by fragmented legacy environments, creating opportunities to improve productivity, resilience, and innovation capacity through secure and trusted engineering ecosystems.



CLECIM SAS

CLECIM SAS, a French company, who recently joined Fouré Lagadec (SNEF Group), is renowned for its expertise in managing complex engineering projects, machining, and manufacturing large-scale components. CLECIM operates a highly specialized production site capable of meeting the technical demands of defense sectors. Its unique expertise enables it to handle large-scale industrial projects from design to manufacturing, including rigorous testing conducted directly at its facility.



EXPERTISE & REPAIR - REVERSE ENGINEERING



Dismantling - Cleaning - Assessment - Expert report with detailed refurbishment proposal and improvement proposal - Design review - Repair and reassembly - Tests and inspection report.

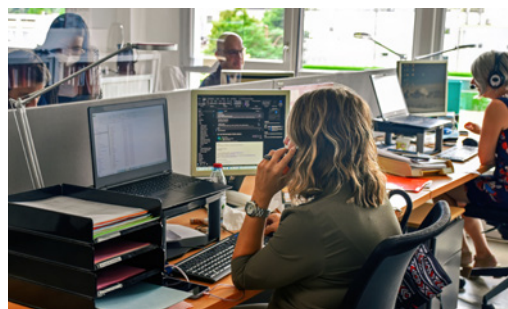
Reverse engineering is used to recreate the design (plans, 3D files) and technical specifications from existing parts to enable its repair, reproduction, or improvement.



SERVING YOUR EQUIPMENT'S LIFECYCLE



Every component from your production facilities is welcome at our workshop to establish its nominal condition. Lifecycle follow-up from the Original Equipment Manufacturer is the key to your sustained performance.



BRINGING YOUR BUSINESS TO A HIGHER LEVEL



We provide a range of expert services such as technical audits, feasibility studies, performance optimization, and safety evaluations. Our goal is to help you improve efficiency and ensure safety in your operations. Partner with us to drive your industrial success forward.



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DEDIENNE AEROSPACE

Dedienne Aerospace is a global leader in aerospace maintenance tooling and associated services for civil and defense markets, with more than 75 years of industrial expertise. We design and manufacture defense tooling and mission-critical equipment supporting air, land and naval defense programs. We support defense OEMs, MROs and government organizations from early design phases through qualification, production and in-service operations, ensuring alignment with program requirements, defense standards and security constraints.



RESEARCH & DEVELOPMENT



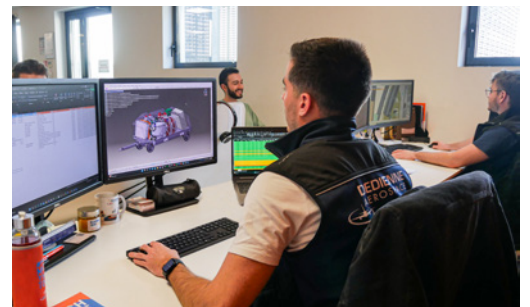
Dedienne Aerospace designs safe, robust, maintainer-friendly solutions aligned with OEM specifications and defense program requirements. Using advanced CAD tools and FEA/FEM methods, our teams support programs from requirements through release, including integration and documentation.



ENGINEERING CAPABILITIES



- Lifting and transportation design expertise
- Mechanical, electrical, hydraulic, and controls integration
- Research and development support



PROGRAM CONTROL



- Configuration management
- Obsolescence and data management
- Technical documentation
- Worldwide technical support



DATA PROTECTION & CYBERSECURITY



- Secure handling and controlled distribution of technical documentation, as required
- Cybersecurity practices aligned with applicable standards to safeguard sensitive technical data and support customer requirements for data segregation and controlled access



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EMITECH GROUP

The Emitech Group is France's leading group of independent testing laboratories, specialising in testing and qualification for the defence and industrial sectors.

With 680 experts across 18 sites, we design and operate testing and qualification facilities covering EMC, climatic, mechanical and electrical testing... in accordance with MIL-STD, DO-160, STANAG and NATO standards.



ENGINEERING SUPPORT FOR R&D AND VALIDATION

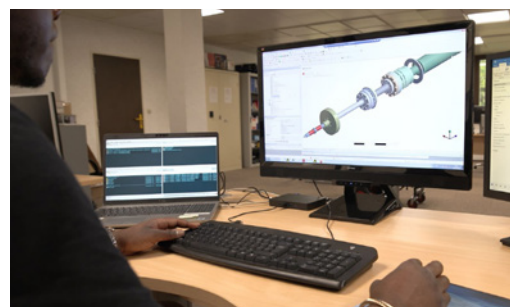


Emitech Group supports R&D teams throughout the development cycle, from specification to validated prototype.

Our engineers draft qualification plans, define test environments and design tailored tooling.

Multi-physics simulation (structural, thermal, EMC, fatigue) complements physical testing to reduce iterations.

Acting as an independent expert in defence, aeronautics and automotive sectors, we help optimise designs and secure qualification schedules.



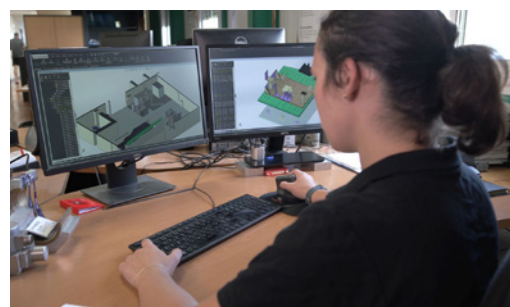
ENGINEERING SUPPORT FOR INDUSTRIALISATION



Emitech Group provides engineering support for the industrialisation of defence and industrial products.

Our teams assist in production test bench definition, process qualification, end-of-line test integration and regulatory compliance.

We offer flexible resourcing, on-site assistance, fixed-price projects or offshore service centres, to accelerate your ramp-up and maintain schedule and quality compliance throughout the production phase.



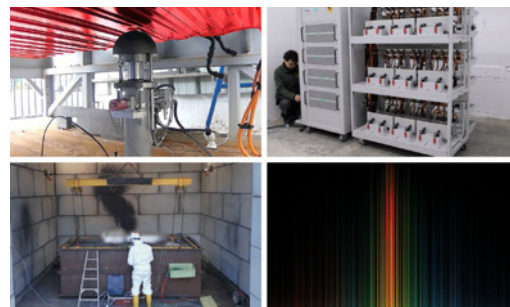
DEFENCE POWER SYSTEM TESTING & BATTERY QUALIFICATION



Emitech Group tests and qualifies power generation, conversion and storage systems for defence platforms and mission payloads.

Our facilities cover military network simulation (28 V DC, 270 V DC, 115 V AC 360–800 Hz, up to 135 kVA) to MIL-STD-704, battery abuse and endurance testing (UN 38.3, MIL-STD-810), and high-voltage systems up to 1,000 V.

We support qualification of converters, batteries, silent-watch power units and auxiliary power systems.

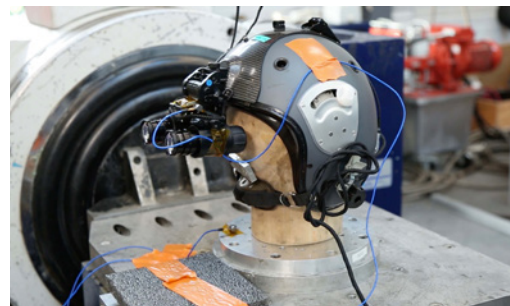


MECHANICAL & ENVIRONMENTAL QUALIFICATION OF DEFENCE SUBSYSTEMS



Emitech Group qualifies mechanical subsystems, mounts, MEMS and ruggedized assemblies for defence environments.

Our test capabilities cover vibration, shock, pyrotechnic shock, endurance and combined environments to MIL-STD-810, STANAG 4866 AECTP-300/400 and DEF-STAN 00-035. From prototyping through to production release, we validate shock/vibration resistance, harsh-environment durability and mechanical integrity across air, land and naval applications.



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EMITECH GROUP

EMC & ENVIRONMENTAL QUALIFICATION OF DEFENCE ELECTRONICS



Emitech Group qualifies embedded electronics and ruggedized computing for defence applications.

Our laboratories deliver EMC testing to MIL-STD-461, AECTP-500 and STANAG, and full environmental qualification (climatic, mechanical, altitude, humidity) to MIL-STD-810 and DEF-STAN.

With France's largest Faraday cage (27*18*10.5 m) and 230 simultaneous campaigns, we cover processing units, power electronics and cyber-hardened architectures.



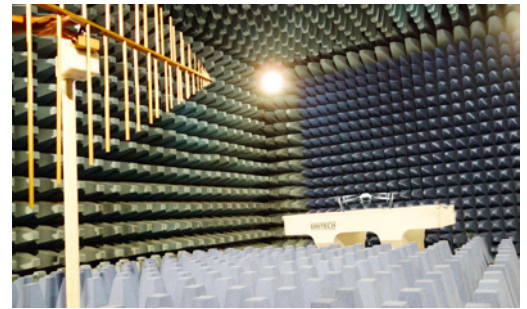
UAV & GROUND ROBOT TESTING AND CERTIFICATION



Emitech Group is France's first notified body (NB 0536) designated by the DSAC for UAV class assessment (C0 to C4) under EU Regulation 2019/945 and EN 4709 standards.

Our full testing offer covers safety, EMC, radio frequency, mechanical, cybersecurity and environmental tests.

For ground robots and armoured vehicles, our large semi-anechoic chamber and roller bench deliver complete qualification to MIL-STD and STANAG.



TEMPEST/EMSEC EVALUATION OF COMMUNICATION EQUIPMENT



Emitech Group evaluates the electromagnetic security of sensitive communication equipment to TEMPEST/EMSEC requirements.

Our laboratories measure compromising emissions and verify compliance with classified information protection standards.

This expertise covers command equipment, radio systems, network infrastructure and embedded systems used by security forces and critical national infrastructure operators.



CYBERSECURITY TESTING FOR CONNECTED DEVICES AND IOT



Emitech Group performs cybersecurity testing for connected devices deployed in sensitive digital infrastructures.

Our services cover vulnerability assessment, penetration testing and compliance with RED Directive §3.3 and ETSI EN 303 645.

We support manufacturers in qualifying their IoT equipment, embedded systems and communicating platforms against cyber threats for critical infrastructure environments.



GNSS JAMMING & SPOOFING RESISTANCE TESTING



Emitech Group validates the robustness of navigation and detection systems against GNSS jamming and spoofing threats.

Our reproducible laboratory scenarios cover RF signal simulation, record & replay analysis, spoofing detection and GNSS-inertial resilience testing.

These tests apply to counter-UAS systems, surveillance sensors and critical geolocation infrastructures, supporting qualification and operational approval files.



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EURODECISION - DECIDEOM GROUP

For over 30 years, Eurodecision has been leveraging its expertise in artificial intelligence, operations research, and data science to support defense sector players in designing robust and customized solutions.

Eurodecision works closely with business teams, technical departments, and institutional partners, adhering to the security and confidentiality requirements specific to the defense sector.



DECISION-MAKING MATHEMATICS AND ARTIFICIAL INTELLIGENCE TO HELP MAKE BETTER DECISIONS



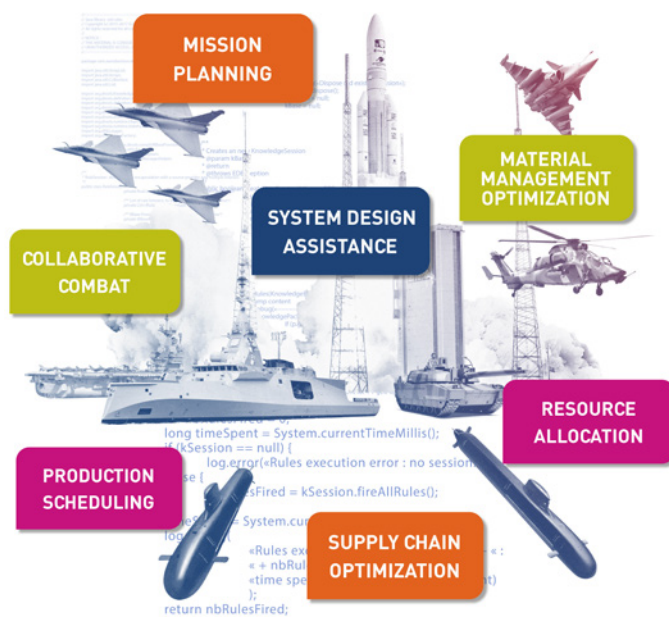
In a context where security, responsiveness, and resource optimization are strategic, Eurodecision's expertise in decision-making mathematics enables:

- **Meeting increased production demands while improving the agility, flexibility, and responsiveness** of the defense industry:

- Supporting the design of weapons and systems (less expensive and easier to produce; more robust, scalable, and maintainable)
- Optimizing supply chains and inventories, as well as the use of resources and production capacity
- Digitalizing and automating the supply chain and production operations.

- **Adapting systems, processes, and practices to the new challenges** facing the armed forces:

- Data processing, analysis, and exploitation: detection of weak signals in large volumes of data, surveillance and reconnaissance systems...
- Mission planning and replanning in real time/time constraints, within a dynamic and interoperable context: collaborative combat, drones, satellite constellations...
- Equipment management, from strategic to operational: sizing of the active fleet, maintenance planning, predictive maintenance, repair support
- Allocation of material and human resources, and support for the deployment of operational forces.



BUSINESS OPTIMIZATION COMPONENTS



Eurodecision has developed **business optimization components that can be integrated into third-party solutions**, each addressing the specific business challenges of its main application areas:

- Supply chain optimization (network design, transportation planning, forecasting...)
- Production optimization (production planning, scheduling...)
- Human resource scheduling (staffing sizing, individualized schedules...)

WHY TRUST EURODECISION ?



- Strong listening and understanding skills for your business,
- Technology at the service of business needs,
- Experts capable of modeling and addressing complex problems,
- Optimized performance,
- Interpretable and auditable AI.



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INTEGRIS COMPOSITES SAS

Led by outstanding technical experts in a wide range of specialist fields, including production technology, technical design and chemical engineering; we specialize in both OEM and retro-fit integration.

Our teams have proven experience with large scale, complex projects within a variety of applications of our composite armor; summarized in statistical and modeling tools and an internal database containing 4000+ solutions. Our systems are internationally qualified to STANAG 4569, NIJ, VPAM.



PROJECT MANAGEMENT AND SYSTEMS ENGINEERING



- Program management and IPT lead
- Successfully managed 12 month 1M+ systems integration effort meeting all deliverable milestones.
- Developed WBS and IMS to support programs
- Monthly reporting of program status and lite EVMS metrics
- Developed and attended all reviews including SRR, PDR and CDR including interim reviews as necessary
- Systems IPT
- Systems engineering management planning
- Requirements identification, decomposition & management
- Architecture & design
- Trade studies
- Operations concept
- Algorithm development
- Interface control
- Configuration management
- Design reviews
- System verification
- Environmental verification



SYSTEMS TEST



- 6 m/s drop tower for impact detection sensor testing
- 10 m/s+ drop tower available
- High speed video Phantom v7
- Engineering staff with ~40 years combined experience with vehicle crash & blast testing in commercial automotive, military vehicles, and aviation. Includes experience doing full scale helicopter crash with active system at Langley Gantry.
- Internal testing according to a variety of MIL, DEF, ISO and DIN standards; ballistic and generic properties; including bonding, adhesion, chemical resistance, low and high temperature testing.
- Experience within field application and testing of vibration, UV resistance, salt & fog and other MIL 810 requirements.



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IREPA LASER

For more than 40 years, IREPA LASER has supported industry in the development, industrialization and integration of laser processes, while training teams in their safe implementation and use.

Specialized in laser welding, laser DED additive manufacturing and laser machining, IREPA LASER serves the most demanding sectors, including defense, aerospace, space and electric mobility.

Leveraging its experts, robotic platforms and R&D capabilities, IREPA LASER supports each project from design to production, including the development of tailor-made processes, technological risk mitigation, qualification, technology transfer and series production of laser assemblies.

In parallel, its training center provides yearly training to more than 1,300 professionals in laser safety and laser processes, while also supporting manufacturers through audits and consulting services.

This 360° approach helps accelerate and secure the transition to industrial-scale production.

PROJECT ENGINEERING



Securing and accelerating your industrial laser projects

IREPA LASER supports manufacturers from the earliest project stages, turning technical requirements into industrial-ready laser solutions.

Our engineers assess feasibility, define critical parameters and develop processes tailored to your constraints in terms of materials, complex geometries, production rates and certification requirements.

With a dedicated technical point of contact, each project benefits from structured management, risk control and comprehensive support through to industrial validation.



LASER PROCESS DEVELOPMENT

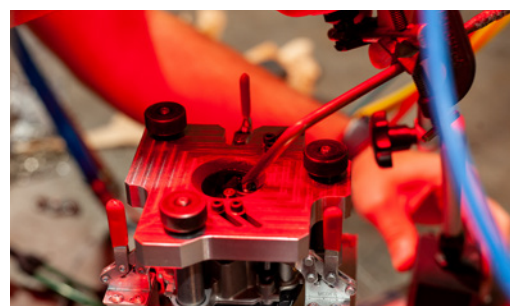


Tailor-made laser processes, qualified for industry

IREPA LASER develops and optimizes laser processes tailored to your applications and industrial requirements.

Our experts define critical parameters, conduct trials on industrial equipment and validate process performance under production-representative conditions. When technological barriers arise, our R&D capabilities and collaborative research programs enable us to deliver concrete and innovative solutions.

The result: qualified, robust and fully transferable processes, ready for deployment within your industrial environment.



INDUSTRIALIZATION & PRE-SERIES PRODUCTION



From innovation to reliable production

Validated prototype? Successful proof of concept? The next step is industrialization.

IREPA LASER qualifies processes, optimizes tooling, produces pre-series parts and prepares manufacturing documentation to ensure a smooth, reliable and fully controlled ramp-up to production.

Our approach secures process repeatability, reduces industrial risks and accelerates the transition from innovation to series manufacturing.



SUPPORT & TECHNICAL ASSISTANCE



A long-term technical partner for your industrial operations

Whether addressing process deviations in production, analyzing failures or optimizing existing laser processes, IREPA LASER provides expert support to diagnose, resolve and improve industrial performance.

Our specialists also assist your teams during critical phases such as production start-up, internal audits and process qualification, ensuring operational reliability, process stability and continuity of production.



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ISD (INGENIERIE SERVICES DEVELOPPEMENT)

ISD Group supports manufacturers and institutions in managing the challenges of availability, maintenance and operational organization.

We operate across support disciplines including MRO, training, reverse engineering and support engineering (LSA, Documentation).

The group currently operates in Europe, the Middle East and Asia, with nearly 40% of its business conducted internationally.

ISD Group has been present in Saudi Arabia (Riyadh) for over 30 years. The GAMI license obtained in 2018 strengthens our ability to support French and Saudi defense industries in maintenance in support.

MRO — FRANCE & INTERNATIONAL

ISD provides you with field experts capable of intervening directly on your sites, wherever they are in the world.

Whether it's a short-term assignment, medium-duration support, or a long-term continuous presence, we adapt our commitment to your operational constraints.

Our teams are well-versed in the demands of expatriate deployments and the complexity of international environments. They quickly integrate local specificities — regulatory, logistical, and cultural — to ensure effective support from the very first hours on site.



REVERSE ENGINEERING

ISD Group operates within Global-MCO, a dedicated group focused on the technical management of equipment in service.

This solution enables simultaneous action on both system upgrades and their support, covering the entire chain — from engineering studies to component redesign, from prototype manufacturing through to series production — while integrating the technical, operational, and operational maintenance (MCO) dimensions.

Our approach: continuous engineering, in the service of your systems' longevity.

Whether addressing a critical obsolescence, reproducing an off-catalogue mechanical part, or reverse-engineering an electronic component that is no longer available, our teams respond with the rigour and reactivity that sovereignty and operational availability challenges demand.



SUPPORT ENGINEERING

ISD designs and structures coherent support systems, aligned with operational requirements and Defence standards.

From design to operational maintenance, our teams carry out Logistic Support Analysis (LSA), work in accordance with applicable standards (1388-2B, S3000L, S2000M, MAT10003), integrating support constraints as early as possible in the system lifecycle to control long-term technical and economic impacts.

ISD also has a dedicated division for the design and structuring of User Technical Documentation (UTD), working in direct collaboration with its maintenance engineering and technical management teams.

Drawing on data from the Logistic Support Analysis, we build complete documentation systems — consistent with contractual requirements and directly usable in operational conditions — structured in accordance with applicable references (MAT 10000, ASD S1000D) and designed to meet the practical needs of field users.



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JOHN COCKERILL DEFENSE

John Cockerill is an international industrial group specializing in technological solutions for energy, industry, and defense. Within the Group, John Cockerill Defense develops and integrates armored vehicles and advanced weapon systems for land platforms, combining firepower, mobility, precision, and operational adaptability to meet the requirements of modern armed forces.

THE EXPERTISE OF JOHN COCKERILL DEFENSE ENGINEERS



At John Cockerill Defense, engineers transform operational needs into concrete solutions. From platform design to the integration of new capabilities, engineering teams support armed forces and institutional partners in the development, adaptation, and evolution of land defense systems. Building on the complementary expertise of the group's brands : including Arquus, Cockerill, Hornet, Agueris and Eurocontrol, John Cockerill Defense engineering covers the entire development cycle: system architecture, mobility, integration, testing, qualification, and innovation.

Designing Scalable Platforms

John Cockerill Defense engineering teams develop open architectures capable of integrating new capabilities throughout the lifecycle of military vehicles and weapon systems.

This expertise can notably be seen in vehicles from the SCORPION program such as the GRIFFON and JAGUAR, developed with Arquus expertise, where modularity, mobility, and system integration meet the requirements of modern operations.

Integrating Next-Generation Technologies

John Cockerill Defense engineers are working on the next generation of military mobility solutions: hybridization, electrification, energy architectures, and connectivity.

The SCARABEE demonstrator, developed by Arquus teams within the group, illustrates this approach through an innovative platform integrating advanced mobility, reduced signature, and new energy solutions. Ongoing work on electromobility and hybridization is also preparing the land capabilities of tomorrow.

Developing Robotic and Autonomous Solutions

John Cockerill Defense contributes to the development of robotic and remotely operated land systems designed to enhance operational safety and efficiency.

The DRAILER project illustrates this expertise through the integration of autonomous capabilities and new mobility functions for future operations, relying on the combined engineering know-how of the group's teams.

Testing, Qualification, and Support

John Cockerill Defense engineering teams support projects through testing, validation, and system qualification phases.

Thanks to its testing resources and field expertise, the group ensures the performance of its solutions in demanding environments and supports customers from requirement definition through to operational deployment.



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Kontron Modular Computers develops rugged embedded computing boards, platforms and mission systems for critical defense, aerospace and transportation applications. With more than 40 years of technological expertise, Kontron supports system integrators with secure, modular architectures designed for scalable mission performance and long-term operational continuity.

Designed, manufactured and maintained in Europe, Kontron solutions combine cybersecurity foundations, open architectures and lifecycle support services to ensure mission readiness over decades.

SYSTEM DESIGN & PLATFORM INTEGRATION



Kontron combines COTS products and engineering expertise to develop and adapt mission-critical embedded systems for customer-specific operational requirements. Our teams support system architecture, platform integration and validation activities across rugged computing, ISR, AI and mission processing applications.

Our Expertise

- Embedded computing and mission system architectures
- VPX/OpenVPX platform integration
- Customisation of COTS platforms and boards
- System validation and qualification support



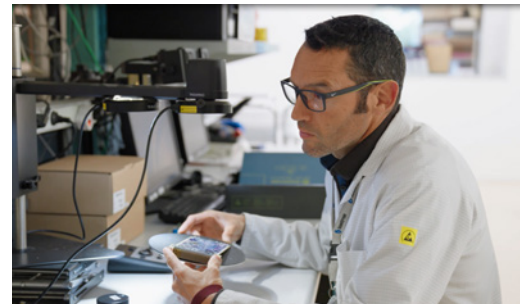
INDUSTRIALISATION & PRODUCTION READINESS



Our industrial capabilities ensure the reliable manufacturing and long-term production of rugged embedded platforms and mission systems. From prototyping to series production, we support secure industrialisation, configuration control and production continuity for critical programs.

Our Expertise

- Design for Manufacturing and production optimisation
- Qualification and production test capabilities
- Configuration and lifecycle management
- Secure and sovereign European supply chain
- Series production and long-term product sustainment



LIFECYCLE SUPPORT & OPERATIONAL CONTINUITY



Kontron supports customers throughout the operational lifecycle of deployed systems with maintenance, obsolescence management and long-term support services. Our lifecycle approach ensures availability, maintainability and controlled evolution of mission-critical infrastructures over decades.

Our Expertise

- Long-term availability and obsolescence management
- Maintenance and technical support
- Technical documentation and support services
- Lifecycle continuity for embedded mission systems
- Designed, manufactured and maintained in Europe



LEGENDRE LOGISTICS

LEGENDRE LOGISTICS is a recognized player in the transport and logistics sector in France and abroad. Its organization into Business Units (multimodal transport, logistics, consulting and engineering, industrial packaging, industrial transfer, sourcing) makes it a flexible, responsive operator capable of providing solutions across the entire supply chain. Its teams of engineers and project managers support its many French and international customers in their most complex projects. Its know-how, expertise and the synergies between its different Business Units enable LEGENDRE LOGISTICS to offer customized, high-end solutions in a wide range of sectors.

SUPPLY CHAIN CONSULTING & ENGINEERING



For several years, we have been relying on our design offices, experts in their field : Multimodal Transport, Logistics & Storage, Industrial Packaging and Industrial Transfer.

The solutions imagined and implemented in response to multi-sector and multidisciplinary constraints can also be deployed as part of an accompaniment to your improvement process. We design together the answers to your current problems and your development projects. Our engineers in transport, logistics and packaging are pragmatic, creative and always on the lookout for the most innovative solutions.



LGM is a mid-sized group specializing in niche technological engineering solutions and services, as well as in advanced industrial-scale electronic design & production.

Our mission is dedicated to meeting the efficiency and sovereignty requirements of major Defence programs.

The promise of our "Supportability & Asset Management" solution: optimizing for durable and efficient assets.



STUDY, DEFINITION, AND IMPLEMENTATION OF PRODUCT SUPPORT & MAINTAINABILITY OF SYSTEMS

When the maintenance and support of equipments and assets are not well managed, their **operational availability** declines, **costs** drift, and **overall performance** deteriorates over time.

To address these challenges, LGM brings **5 complementary offers**, which can be **activated individually or combined**, with **tailored delivery modes** :

- 1- Operational and logistical performance:** ensure the best balance between availability, costs, technical capabilities, and asset durability.
- 2- Support and Maintenance Management:** structure and oversee support and maintenance to ensure controlled operation all over the lifecycle.
- 3- Applicable maintenance framework:** ensure data consistency and continuity to secure maintenance and support operations.
- 4- Electronic repairs & retrofits:** ensure the longevity of critical systems by managing repairs, upgrades, and electronic obsolescence.
- 5- Tool-based processes and methods:** deploy tool-based processes and solutions to ensure reliability and sustainably improve operational capability of systems.

Our **key differentiators** :

- Overview of the entire life cycle
- Hands-on approach and pragmatism
- Ability to structure and process data
- Measurable improvement in availability and performance

Do not hesitate to contact us : www.lgm.group/contact

 **supportability & asset management**



MUSTHANE

Musthane is a French company specialized in the design and manufacturing of flexible composites made from rubber-coated reinforced textiles. Our solutions enhance the survivability and mobility of operations and vehicles in marine, land, and air environments.

We control the entire supply chain, from raw material formulation and manufacturing to final product delivery, ensuring process control, traceability, quality, and reliable lead times.

In the defense sector, our expertise is structured around two complementary pillars:

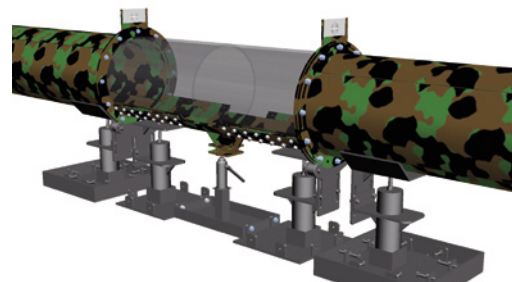
Design to Flexibility® - Solutions based on flexible and resilient structures: flexible tanks, inflatable jacks, pneumatic pipe plugs, lifting bags.

Design to Mobility® - Equipment designed for rapid deployment operations: helicopter landing mats, forward area refueling systems, temporary access roads

ENGINEERING SERVICES



Musthane's engineering team transforms operational requirements into validated concepts, prototypes and industrial solutions. Our expertise covers the full engineering cycle, from system studies and architecture definition to modelling, simulation, detailed design, integration and test planning. This approach supports technology maturation and risk reduction, enabling the development of reliable solutions adapted to demanding operational environments.



PANOPTÈS

Traceability, RFID, IoT and connectivity expertise are at the core of Panoptès' business.

Panoptès is a French technology player specializing in the capture and use of field data for supply chain, industry and critical operations. The Panoptès Group designs software platforms and connected solutions combining RFID, IoT, mobility and artificial intelligence to transform every physical event into actionable data.

Panoptès offers an integrated approach combining software development, systems integration and field equipment, backed by more than 30 years of expertise in the traceability of equipment, products and goods flows through large-scale national deployments for major players in defence and security, industry, energy, aerospace, transport and logistics.

Its solutions help optimize flows, automate operations and strengthen real-time visibility of assets throughout all their movements.

ATHOS MRO



Athos MRO is Panoptès' software platform for maintenance and lifecycle management of critical assets. Compliant with ATA Spec 2000 and **NATO** requirements, it ensures asset traceability, configuration control, maintenance tracking and logistics management.

By integrating RFID, IoT and secure mobility, it automates field data capture, improves operational availability and supports compliance in aerospace, defence and industry.



KLIK



KLIK is Panoptès' RFID solution dedicated to industry and asset management. Instant inventories, flow tracking across factories and warehouses, and real-time stock reconciliation without any break in traceability.

Natively connected to Moov&Track, **KLIK** turns every read point into actionable data. Fast to deploy, it adapts to the most demanding operational constraints.



MOOV&TRACK



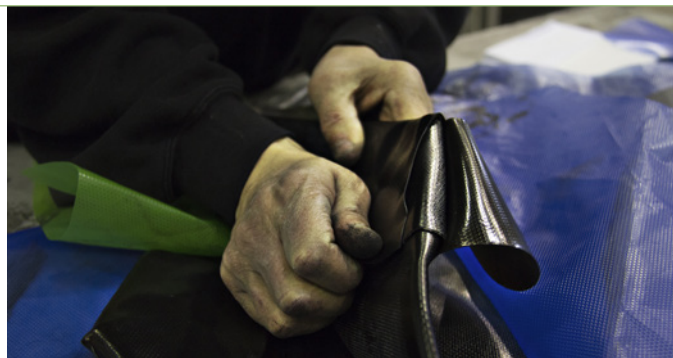
Moov&Track is Panoptès' sovereign data hub: a central engine that aggregates, orchestrates and delivers traceability data from all sources — RFID, AutoID, geolocation, IoT and third-party solutions.

Multi-site, real-time, and hosted in France, it is the technical foundation for **KLIK** and **ATHOS**. It integrates seamlessly with **Panoptès** solutions as well as with the full range of identification and mobility systems available on the market.



PRONAL

Pronal, with over 65 years of experience working closely with world armed forces designs, manufactures, installs, distributes and maintains, with offers standard, tailor-made & turnkey solutions for fuel and water logistics. Our flexible engineering solutions are highly versatile and can be quickly deployed on-site, easily transported by trucks, helicopters, or vehicles. They are suitable for transportation by land, sea, or air.



FLEXIBLE ENGINEERING SERVICE



Pronal relies on an integrated engineering department bringing together R&D engineers, technical specialists, quality managers and project managers involved at every stage of the industrial lifecycle: design, prototyping, manufacturing, installation and maintenance. Thanks to its expertise in flexible materials and its in-house material and leak testing laboratory, Pronal designs and develops tailor-made flexible solutions for storage, lifting, protection and sealing applications, adapted to the most demanding environments.

Beyond the design phase, Pronal supports its customers throughout the full industrialization process in order to ensure robust, repeatable and controlled production. This approach includes Design for Manufacturing and Assembly, manufacturing process definition, development of dedicated tooling, as well as the creation of testing and validation benches.

Pronal teams also define quality plans, inspection procedures and monitoring methods to ensure compliance with technical, operational and regulatory requirements. Configuration management and document control guarantee full traceability and control of product evolution throughout the project lifecycle.

With a continuous improvement and production ramp-up approach, Pronal also supports industrial implementation with partners and suppliers in order to optimize production efficiency, secure lead times and control costs. This expertise ensures consistent product quality and performance, from prototype development to full-scale production.



*Soframe develops, manufactures, and supports **high-performance tactical mobility and logistics platforms for global defense and security applications**. Building on a legacy of innovation (formerly Lohr Défense), Soframe combines French engineering excellence with strategic international partnerships to deliver durable, reliable solutions tailored to the most demanding operational environments*

SOFRAME supports the maturation of technical concepts for land and security systems. Our expertise includes:

- System studies: Analysis of operational needs and technical architecture definition.
- Modeling and simulation: Virtual validation of performance (mobility, protection, system integration).
- Prototyping: Development of functional demonstrators for real-world testing.
- Technology integration: Sensors, effectors, and embedded systems tailored to demanding environments.

SOFRAME turns validated designs into production processes tailored to defense requirements. Our services include:

- Industrial optimization: Design for Manufacturing (DFM) to reduce costs and lead times.
- Quality management: Inspection plans compliant with MIL-STD and ISO 9001 standards.
- Industrial partnerships: Collaboration with qualified subcontractors for critical component production.
- Risk management: Supply chain analysis to ensure production continuity.



SOGECLAIR

SOGECLAIR supports its customers across the entire product lifecycle, from initial design to in-service support, delivering tailored solutions for both development and operational excellence.

With teams authorized to operate on classified programs (DRSF), we provide comprehensive technical support throughout the full V-cycle, ensuring responsiveness, compliance, and performance at every stage.

Our expertise enables us to address complex industrial challenges while securing the reliability and sustainability of critical systems.

END-TO-END PRODUCT DEVELOPMENT



SOGECLAIR supports customers across the full product development lifecycle, delivering high-value engineering expertise from design to in-service support.

Our design office combines a strong industrial mindset with a systems-driven, end-to-end approach.

Our capabilities include mechanical and composite engineering, project and configuration management, specific livery and paint, customer support and certification.

We operate on complex systems, including structures, system integration as well as weapon system, ensuring performance, reliability and compliance.



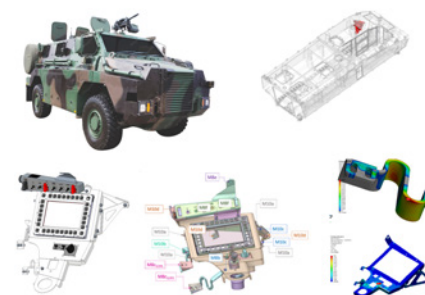
SIMULATION & ANALYSIS



SOGECLAIR provides advanced simulation and analysis expertise for high-end engineering projects.

Our capabilities cover structural mechanics, vibration, fatigue and damage tolerance, CFD, and thermal analysis.

Through high-fidelity modeling and a systems-driven approach, we support all development phases, ensuring performance, reliability and compliance in demanding operational environments.



MANUFACTURING ENGINEERING



SOGECLAIR supports customers across industrialization, integration and validation phases.

Our expertise includes manufacturing strategy development, deviation and non-conformance management, turnkey projects (prototypes and industrial means), supplier management and industrial transfers. We also support the implementation of methods engineering structures.

Leveraging local manufacturing capabilities and Industry 4.0 consulting, we enhance performance, efficiency and quality across complex industrial environments, with applications in areas such as planning and management, simulation, routing and methods, product support and process improvement.



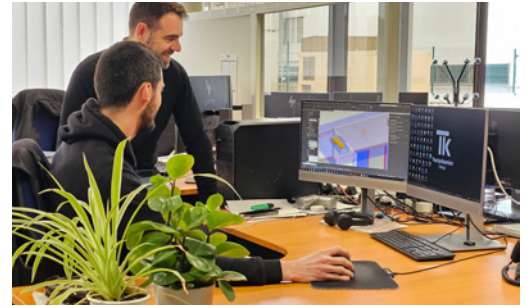
TOUTENKAMION GROUP

Toutenkamion Group is a French industrial group specialising in mobile mission-critical solutions, with annual revenues of €50 million and a workforce of more than 400 employees. The Group is recognised as a European leader in the design, manufacturing, and transformation of truck cabs, mobile units, and shelters for defense and other high-demand operational environments.

Building on strong engineering expertise and a wide range of integrated technologies, we develop high-value solutions tailored to demanding operational and defense applications, positioning Toutenkamion Group as a trusted partner for complex mobility and embedded systems projects.

Supporting customers at every stage of the project lifecycle, Toutenkamion Group provides end-to-end expertise, from system design and qualification to in-service support, MRO services, and spare parts management.

END-TO-END DEVELOPMENT AND QUALIFICATION OF COMPLEX EMBEDDED SYSTEMS



We operate with a project-driven approach from the pre-sales phase and manage the entire product development lifecycle: design, prototyping, and qualification.

Our organization is built around:

- 5 engineering departments bringing together 27 engineers and technicians specialized in mechanical, electrical, hydraulic, thermal, and EMC engineering
- A dedicated Innovation and R&D team
- Advanced calculation and simulation capabilities (ANSYS, ALTAIR, SolidWorks Simulation, Abaqus)
- Expertise in materials and manufacturing processes
- A process engineering department covering assembly, riveting, painting, and welding
- A responsive prototyping team
- A qualification department performing vibration, road, thermal, and EMC testing in accordance with standards such as MIL-STD, STANAG, and AECTP

Our development process is structured around five key stages:

1 – Operational Requirements Analysis

Identification of explicit and implicit operational needs, translated into technical constraints (weight, power, mobility), operational constraints (ergonomics, deployment, accessibility), and environmental constraints (field, climate, transport conditions).

2 – System Architecture and Design

Definition of the overall architecture of complex embedded platforms (vehicles, shelters) integrating multiple subsystems: power generation and distribution, HVAC, electronics, networks, sensors, masts, technical furniture, hydraulic systems, and photovoltaic solutions.

Management of mechanical, electrical, and thermal interfaces with trade-offs between performance, robustness, compactness, and maintainability.

3 – Modeling and Simulation

Dimensioning and numerical validation through finite element analysis (FEA): bonded, welded, or bolted assemblies; static, modal, vibration, shock, fatigue, and thermal analyses.

4 – Qualification and Testing

Definition and execution of qualification tests internally or with European recognized partners (EMITECH, CETIM, UTAC, IDIADA, APAVE, French Defence Procurement Agency (DGA), French Welding Institut): road, vibration, climatic, functional, and EMC testing.

These tests validate mechanical, electrical, and ergonomic performance under real operating conditions while reducing technical risks through iterative design/testing loops.

5 – POC, Prototyping, and MVP Development

Development of Proofs of Concept, functional prototypes, and operational demonstrators through rapid design > manufacturing > testing > adjustment cycles.

This approach ensures fast concept validation and effective risk management through product and process FMEA analyses.



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