Integrated Systems

AGILITY, EXTENSIBILITY, OPEN STANDARDS

Tackling critical industry challenges and ensuring customer mission success can often not simply be addressed through a single-point solution. To deliver mission-effective systems, we look beyond a single market, combining hardware and software with diverse initial applications to address challenges in an array of specializations.

leidos

OUR APPROACH

Our integrated systems leverage model-based systems engineering (MBSE) and are built on the foundations of agility, modularity, extensibility, and open standards. We deliver high-performing hardware and software systems to solve challenges in various specializations, including sensors and collection, virtual training, cargo inspection/baggage handling, autonomous unmanned systems, space, hypersonics, and strike systems.

Our integrated systems approach focuses on scaling cutting-edge manufacturing and integration of our programs, including products to enable installations of the latest technology from our innovation center and research and development (R&D) programs. We further customize our approach based on the type of customer and system we are manufacturing or integrating and apply rigorous system engineering processes based on our company standard EngineeringEdge® NextGen set of tools. Our Model Base Systems Engineering (MBSE) approach improves productivity, reduces risk, provides greater design innovation, increases communication, and delivers superior system quality to our customers.

OUR CAPABILITIES

Leidos is a recognized global leader with expertise in large, complex integrated systems gaining invaluable knowledge and learnings from executions across multiple markets, delivering high-performing hardware and software systems to solve challenges with an array of specializations. We understand system integrating and engineering can be challenging and complex, but with our customer-centric approach and multiple market experience, we can support all our customer's critical mission needs.

Advanced Computing

We transition advanced solutions to programs of record in low- space, weight, and power (SWaP), high-performance packages, including high computer processing capacity for applications where low latency is critical, onboard processing is essential, and communication bandwidth is limited. This includes design, development, and fabrication of novel System-on-a-Chip (SoC) processors exploiting the latest signal and imaging technology derived from commercial cell-phone/smartphone processor cores and high-speed inter-processor communications fabrics.

Assured-Position Navigation and Timing

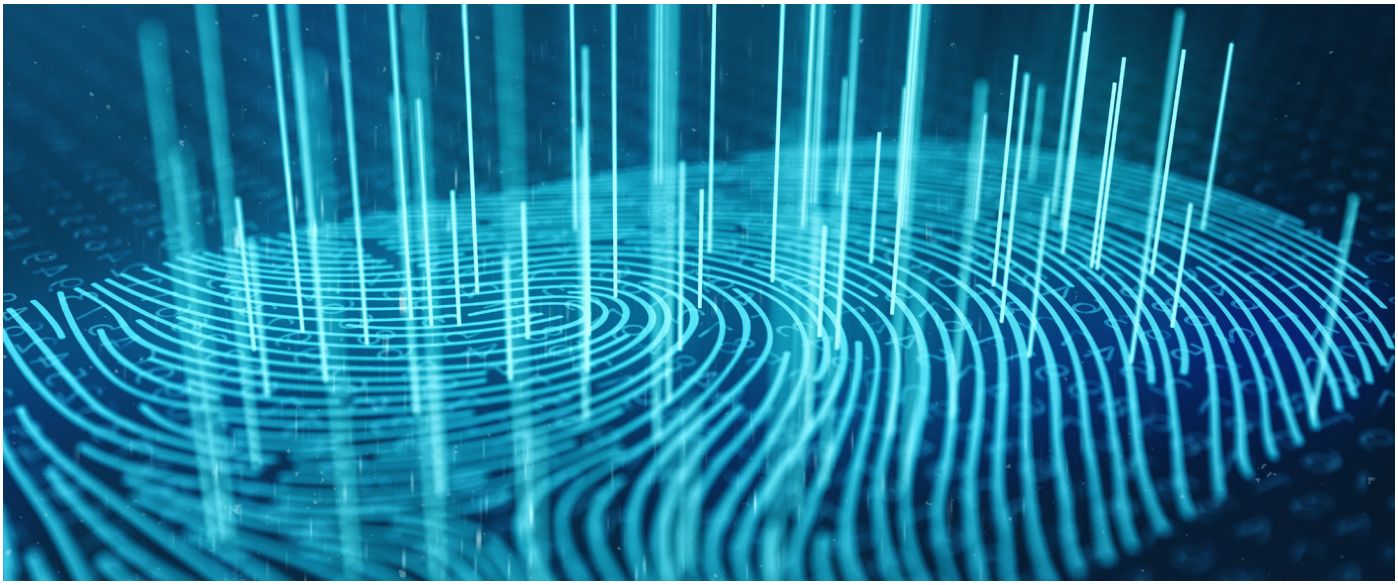
Leidos develops imaging systems to provide high accuracy Position Navigation and Timing (PNT) even in the absence of GPS navigation signals. We develop and field systems for missile, manned/unmanned aircraft, and ground vehicle applications.

Autonomous and Unmanned Systems

Leidos designed, developed, and integrated the first long-endurance medium-displacement unmanned surface vessel to execute autonomous maritime missions and to increase capability and capacity at a lower cost and risk profile by augmenting manned force structure. Underlying this capability is our maritime autonomy, which is modular, open, and transferrable–and useful across a wide variety of maritime autonomous or partially manned platforms. Our autonomous and unmanned platforms help make operating in higher-risk environments safer and more efficient for governments and industry by providing cost-effective sensor systems, signal processing, communications, hardware, and software to support vital missions.

Biometrics

We understand the power of unique human identification and play an active role in programs critical to the safety of citizens, facilitation of commerce, and security of nations with biometric solutions. We develop a range of innovative devices, systems, and algorithms to support automated fingerprint and palm print identification, facial and iris recognition, DNA identification, and all other forms of biometrics security.



Electro-Optical (EO) and Radio Frequency (RF) Sensing

We develop innovative solutions in sensing and signal processing for space infrared, infrared (IR), ultraviolet (UV), and multi-/hyper-spectral sensing, radar, and RF communications applications. Our work often focuses on real-time threat detection and situational awareness in demanding tactical and strategic environments, including developing high-performance space EO/IR sensors and signal processing to detect and track ballistic and hypersonic threats. We also develop novel sensors for space situational awareness and remote proximity operations.

Ground, Ocean, and Radiation Sensing

Leidos performs acoustic, magnetic, and seismic sensing technology using very low-SWaP sensing and signal processing applications that include ultra-low-power cueing technology to enable long life. Our ocean sensing systems have sensitive passive acoustic technology to detect and counter surface and subsurface threats, a buoy-based "Internet of Things" for sensing the ocean surface over wide areas, along with autonomous surface and undersea systems carrying sensors and anti-torpedo countermeasures. We develop and deploy radiation-sensing devices, including X-ray radiography imaging systems for explosive ordnance disposal (EoD) applications, solid-state neutron detectors for border portal monitoring, gamma backscatter sensors for contraband detection, and gamma-ray spectrometers for detection, location, and ID of radiation sources.

Security Detection and Automation Solutions

Leidos is a global leader in security technology systems for airports, ports and borders, and other critical infrastructure. We deliver fast, frictionless, and fully integrated solutions that secure the movement of people and commerce around the world.

Space

With the acquisition of Dynetics, Leidos is a disruptor within the aerospace and defense industry. Over the last decade, Dynetics has evolved from building small satellites to large space flight hardware—developing a reputation as a company that provides reliable, rapid, and efficient space solutions. Dynetics is a key player in NASA's Artemis lunar exploration program and future expeditions to Mars and beyond.

Strike Systems and Hypersonics

With the acquisition of Dynetics, Leidos is also leading the way in developing new classes of weapons and hypersonic glide vehicles to support our warfighters and defend our nation. Our Small Glide Munition (SGM) features a modular design, allowing multiple common variants and considerable design flexibility. By mounting the seeker nose section, tail kit, and wing assembly directly to the warhead case, the SGM allows different seekers, warheads, and other subsystems to be readily incorporated.

Our hypersonic offerings include glide body prototyping, developmental testing, booster design and development, hardware-in-the-loop testing, small satellite development and associated EO/IR sensor development, and radar systems analysis and development.

Tactical Data Links

Leidos enables the rapid delivery and exchange of information between command and control and sensor platforms within land, air, maritime, and space domains to deliver situational awareness and enhanced operating effectiveness via mission-critical communication systems. This includes software-defined radio (SDR) systems and mobile ad hoc networks (MANETs) for demanding applications.

Transformational Reliable Acoustic Path System

Transformational Reliable Acoustic Path System (TRAPS) complements fixed surveillance systems and Surveillance Towed Array Sensor System (SURTASS) by providing flexibility to Theater Anti-Submarine Warfare (TASW) commanders worldwide, allowing the fleet to address operational gaps in wide-area undersea surveillance using a deep water deployable system.

FEATURES	BENEFITS
Investments in R&D programs	Ensures development of advanced technology in manufacturing and integration applied to solve customers' mission-critical challenges
Leverages our MBSE approach and applies rigorous system engineering processes based on our company standard EngineeringEdge NextGen set of tools	Ability to visualize systems improves productivity, reduces risk, delivers greater design innovation, increases communication, and provides superior system quality
Combines hardware and software across an array of specializations	Ensures mission success through seamless system integration
Defines system model artifacts once and reuses them throughout the project lifecycle	Improves the quality of data and increases engineers efficiency
Provides faster and more comprehensive assessment of proposed baseline changes	Reduces the time it takes to assess and update systems engineering artifacts
Identifies relevant processes based on customer requirements and project characteristics and is dynamic and flexible to accommodate changing requirements throughout the lifecycle	Reduces cost and minimizes overall project timelines through automated process optimization
Integrates standard management methodologies and models into all functions, including planning, monitoring and maintenance, reporting, escalation, and more	Facilitates project communication and collaboration across all levels of the organization, and every phase of a project or product lifecycle
Developing situational awareness and advanced threat detection	Adapts technology from the commercial world to advance microelectronics for sensors and signal processing
Use international standards to provide a universal baseline and help maintain interoperability between platforms	Reduces risk and cost during integration and deployment

PROVEN SUCCESS

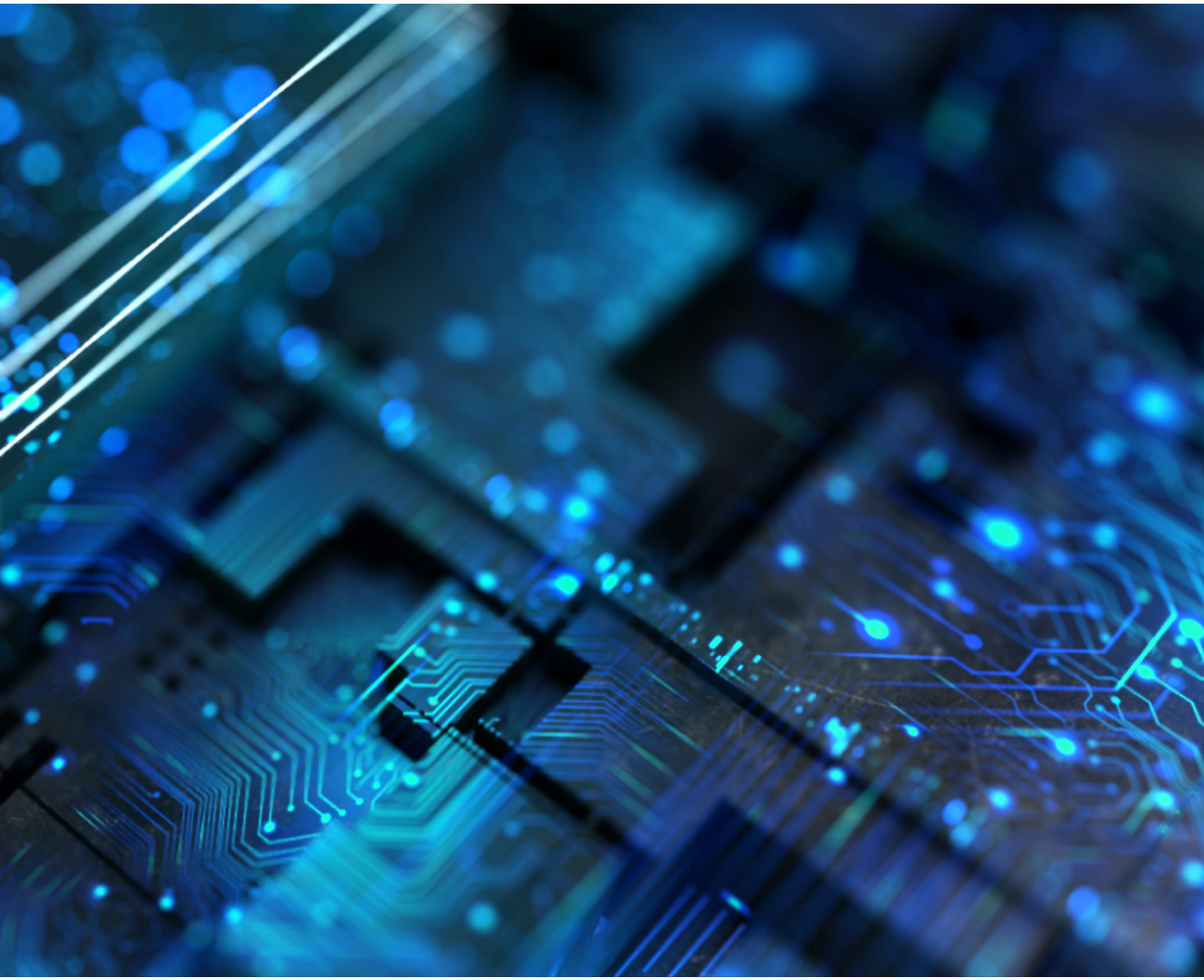
- Leidos maintains the following external accreditations facilitated by the implementation of EngineeringEdge NextGen: ISO 9001:2015, ISO 20000-1:2011, ISO 27001:2013, AS9100 Rev D, CMMI-DEV Maturity Level 3, and CMMI-SVC Maturity Level 3. These enterprise credentials span our civil, defense, health, and intelligence domains.
- Deployed 700+ VACIS vehicle screening systems across 70+ countries
- Leidos' ProVision is the most widely developed advanced personnel screener with 2,400+ procurements worldwide
- Manufactured over 65,000 nuclear detections, radiographic sensors, and imaging systems
- 30 years of Innovation and Commitment to Tactical Data Links working with Australian, UK, and U.S. government agencies

WHY PARTNER WITH LEIDOS

Our expertise in large, complex integrated systems lies in the breadth and depth of knowledge and learning from executions across multiple markets. We are committed to providing solutions to our customer's most complex system challenges through a diverse range of specializations.

NEXT STEPS

Contact our integrated systems experts for help tackling your organization's large, complex systems challenges.



LinkedIn: Leidos
Facebook: Leidosinc
YouTube: Leidosinc
Twitter: @Leidosinc

FOR MORE INFORMATION

leidos.com/integrated-systems | **leidos.com/contact**

leidos