

# Leidos Software Factory



## Delivering Mission Critical Software at Silicon Valley Speed

At Leidos, we understand that legacy software solutions are often costly to maintain and cannot keep pace with evolving user needs, dynamically changing requirements, and complex environments. Organizations are under increasing pressure to modernize legacy systems and integrate new technologies while adhering to tight timelines, strict budgets, and robust security requirements.

The Leidos Software Factory has a track record of meeting these challenges, with proven success in fielding mission-critical programs in two-week increments or less. We leverage scale, knowledge transfer, adaptation, and reuse to rapidly deliver high-quality, secure, and cutting-edge software to resolve our customers' most pressing operational needs. We conduct extensive research and development activities to help us incorporate cutting-edge technologies and methods, such as Zero Trust and AI/ML, into our commercial and government solutions.

### The Leidos Approach

Leidos delivers superior solutions through our uniquely holistic approach to Agile and DevSecOps software development. Our culture is the foundation of our software factory and is embodied in an "egoless and ownerless" mentality across our teams built through 15 years of Agile and DevSecOps experience. Our culture empowers highly skilled and innovative developers to create value-added software solutions at a speed, cost, and scale competitors simply cannot match.

► **Open Architecture and No Vendor Lock.**

Leidos takes pride in being technology-agnostic — an honest broker with discriminating Leidos technologies, but with flexible processes to fit each customer’s unique needs. Our production pipelines are built securely, royalty-free, and are completely tailorable and configurable. Leidos delivers without dictating the tools used in the development process, giving both Leidos and its customers the freedom to implement new tools in the future. We work frequently with small businesses, non-traditional businesses, and academia, providing the ability to bring in specialized skillsets to find the best solution for customers’ challenges.

► **Transparency.**

Leidos embraces full internal and external transparency. Nothing is hidden as Leidos collects metrics, monitors performance, and applies structured processes to ensure quality and reliability in releases, all of which we share with customers during the development and deployment process. We enable transparency by providing all stakeholders with unfiltered access to our development environment and tools, supplemented by intuitive dashboards that provide near real-time metrics and key indications and warnings around performance, staffing, and cost.

► **Continuous Collaboration.**

Leidos believes in continuous collaboration inside our factory and with our customers. Internal collaboration promotes innovation through perpetual sharing of knowledge and lessons learned across a variety of commercial and government domains. Leidos emphasizes the importance of user input and that feedback loop is a critical aspect of our DevSecOps mindset. Continual feedback guides software direction, design, form and function, and helps ensure Leidos builds the right software for its customers that users and other project stakeholders can embrace.

► **Overachieving on Security.**

Leidos drives security into everything we build, from classified government program accreditation to private health information compliance for commercial customers. Our proven approach to security is embedded throughout the software lifecycle—from definition and design to continuous scanning, testing, configuring Security Technical Implementation Guides (STIGs), deployment, continuous monitoring, and remediation. We address security at the very beginning of projects as part of the backlog grooming and design framework, ensuring implementation of

proper controls for a secure software foundation. Leidos also leverages customer cybersecurity experts to identify risks and inject mitigation approaches throughout program execution. Our systematic approach to security design and automated testing throughout the project lifecycle enables Leidos to easily achieve compliance and facilitate a continuous authority to operate (cATO) environment.

► **Continuous R&D investment.**

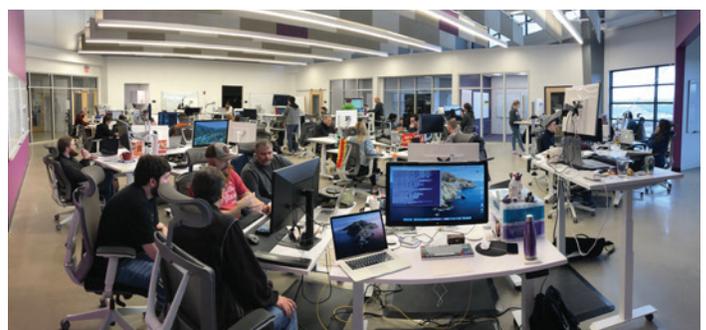
Leidos’ Software Factory benefits from continuous investments in ourselves. When Leidos is unable to find external technologies to support development teams, we create them. This approach ensures the Software Factory stays at the forefront of innovation and leverages best-of-breed processes, tools, and infrastructure that we can apply across our diverse portfolio at scale. See the Our Capabilities section for more details on a subset of Leidos Software Factory innovations.

► **Organization.**

The Leidos Software Factory operates as a multi-location matrix comprised of talented engineers across several disciplines. We attract, train, and grow world-class software engineers, infrastructure/DevOps engineers, user experience (UX) designers, product managers, automated test engineers, and other complementary specialists to form teams tailored to meet the unique needs of each project. Each of our Software Factory sites is collocated with major universities, and our close partnerships with these schools help us attract top talent while also providing opportunities to collaborate with campus activities and leading research initiatives.

► **Facilities.**

Our Leidos Software Factory facilities are custom-built from the ground-up to execute in an Agile and collaborative manner. Our sites look and feel different than traditional government contractor facility and complement our culture of innovation, collaboration, and inclusiveness.



## Our Capabilities

Leidos delivers superior outcomes while driving significant impact for government and commercial customers.

Through disciplined processes, common tools, reusable frameworks, automation, collaboration, and domain expertise, the Leidos Software Factory delivers secure, mission-quality software at Silicon Valley speed.

- ▶ **Leidos Enterprise Application Foundry (LEAF):** A set of Leidos-developed reusable software libraries that allow our engineers to deliver cost-effective, modern, microservices-based software solutions to our customers at near commercial off-the-shelf (COTS) speed. LEAF significantly reduces the amount of boilerplate code needed for software applications and lets development teams focus on customer-specific needs such as look, feel, interfaces, and unique business logic. A Fortune 500 company recently estimated that LEAF would save approximately 50% in development time and cost based on their independent assessment.
- ▶ **Acorn:** A Leidos framework that provides a set of reusable Infrastructure-as-Code (IaC), Configuration-as-Code (CaC), and Security-as-Code (SaC) libraries to quickly configure, deploy, and maintain virtual environments necessary for developing, testing, and operating our software solutions. Acorn is based on two key Software Factory tenets:
  - Treating everything as code (EaC) so that the management of development and deployment environments is subject to the same quality and configuration control as software source code
  - Remaining vendor and technology agnostic by purposefully abstracting our solutions from specific technology choices so that our solutions can evolve as technologies evolve
- ▶ **Portable DevSecOps:** EaC implementation enables Leidos to quickly create a secure Agile development environment and CI/CD pipeline inside the customer's preferred infrastructure, allowing Leidos teams to be productive immediately on project initiation.
- ▶ **LaunchPad:** A reusable set of tools and playbooks that compresses downtime spent during server initialization and cloud account generation for all new projects. LaunchPad automates and streamlines instantiation of the development environment, sharply reducing the software development cycle.

## ▶ Portfolio Analysis and Lifecycle Management

**(PALM):** A management dashboard that aggregates program data across portfolios for real-time management insights, leveraging data already collected through common work management tools such as Jira. This tool provides complete transparency for customers, stakeholders, and development teams to support continuous improvement and proactive management based on key leading indicators around performance, cost, and staffing.

## Proven Success

Leidos successfully supports numerous customers across a diverse array of industries—from global airbase management to autonomous systems to commercial healthcare products.

- ▶ Modernized a legacy application in just four months—replaced the previous application and reduced mission-critical tasks from hours to seconds – resulting in **83% faster performance**.
- ▶ **Reduced fielding cycles from 5 months to 2 weeks (90% reduction)** compared to legacy waterfall-based fielding timelines.
- ▶ Modernized three mission-critical applications for a U.S. military department in **1/3 of the time estimated by the customer (3x faster)**.
- ▶ Architected a solution that enabled the customer to **switch databases on a fielded system in only 48 hours** and remove license costs, resulting in faster and cheaper operations for the agency.
- ▶ Delivered a cloud-hosted healthcare application **less than five months after contract signing**.
- ▶ Ramped up **four large scrum teams** – including product owners, software engineers, and DevSecOps engineers – **in only two months**.
- ▶ Provided a government program with **two scrum teams** for six month surge support to address new requirements, then reabsorbed teams back into the Software Factory upon successful completion.
- ▶ In response to critical operational needs (e.g., Hurricane Dorian, COVID-19, Afghanistan withdrawal), delivered new features from initial concept into production **within one week**.

## Why Partner With Leidos

Leidos understands our customers and can quickly deliver advanced mission-critical software capability, yet we do so with the look, feel, innovation, and speed of a Silicon Valley tech company, not a traditional aerospace and defense contractor.

### Innovation and Collaboration.

Leidos supports software projects across the commercial and industry space—from healthcare and energy to government agencies and research and development efforts. Our relationships with research universities bring constant innovation and attract skilled talent to our Software Factory with higher retention rates and lower labor costs than the norm.

### Trusted Partnership.

For Leidos, placing our customer's interests first is not just a tagline—we live it. Leidos delivers open architectures that avoid vendor lock and ensure our design solutions bring the right products to bear. The Leidos ethos is to break up monolithic software, reduce or eliminate stovepipe systems, and drive the industry to modern, open architecture applications.

### Organized to Accelerate.

The Leidos Software Factory leverages several accelerators that bring speed, capability, consistency, and quality to solutions. We provide these capabilities free for our customers, with no license costs as part of our overall value proposition. We tailor the size and composition of our teams to meet customer unique mission requirements, budget, and timelines while delivering consistent and superior performance.

#### FOR MORE INFORMATION

[leidos.com/mission-systems](https://leidos.com/mission-systems) | [leidos.com/contact](https://leidos.com/contact)