

# Software Factories



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 these legacy systems and integrate new technology all while adhering to strict timelines and budget. Most organizations assert they have a mature DevOps toolchain and process, but that is just a small part of modernizing software in today's world.

There is one simple question that distinguishes the true practitioner from the pretender:

***Do you field software to mission-critical programs in two-week increments?***

At Leidos, we do this across customers and industries — driven by our Software Factories approach.

## OUR APPROACH

Agile and SecDevOps practices and tools that reduce fielding cycles > 90% and help modernize application 3x faster than traditional approaches. We have extensive experience modernizing legacy applications into scalable microservice architectures, delivered using proven continuous integration and continuous delivery (CI/CD) pipelines that deploy applications into customer-preferred environments (from on-premises to full cloud deployment) along with full government right and zero royalty fees. Our Factories are the product of continuous investments to ensure we stay at the forefront of technology and leverage best of breed processes, tools, and infrastructure.



## OUR CAPABILITIES

At Leidos, our factories are meant to ensure Agile and SecDevOps are a fundamental part of our maturity model to deliver consistent results at scale and drive significant impact across our customers. Our Software Factory maturity model includes six key pillars:

- 1. Facilities:** Our facilities are custom built for Agile and modeled from the ground up after Silicon Valley, with large open facilities, mobile desks, break out areas and classified environments all meant to maximize collaboration while providing ample space for thoughtful innovation.
- 2. Processes & Tools:** We have turnkey CI/CD pipelines proven to deliver responsive, quality solutions for commercial customers as well as classified mission-critical systems. Our pipelines are built securely, royalty-free, and are completely tailorable and configurable. This flexibility enables us to adapt to the needs of our customers quickly and efficiently while maintaining consistency allowing our experts to move between projects with near-zero friction.
- 3. Organization:** Our factories operate as a multi-location matrix with hundreds of developers available to provide the right skill sets on demand for the right duration. We use analytics to drive our business, from forecasting our “demand signal” by skill type (e.g., AI/ML, UX expert, software developer, etc.) to managing our talent acquisition pipeline, making sure we always have the right scale to meet the projected needs of our customers. Further, Leidos has a global reach and provides the ability to conduct “follow the sun” development with international locations in Europe and Australia, integrated through our global fabric.
- 4. Software Diversity and Complexity:** Our factories support multiple programs in multiple industries, increasing our ability to share lessons learned and best practices across industries. This is evidenced by our simultaneous and collaborative support for commercial healthcare (continuously deploying live software to customer locations) and mission-critical government work that includes autonomous systems. Our ability to matrix staff across a broad businesses base helps inject commercial best practices into government programs and inject mission-critical security into commercial programs.
- 5. Security:** Security comes first in everything we do, from classified program accreditation to HIPAA compliance. Our security approach is embedded in our facilities, in our backlog management process, in our secure coding practices, and in our continuous scanning and testing processes, all with complete customer transparency.
- 6. Culture:** Culture is the bedrock of our factories. It is embodied by our “egoless and ownerless” mentality across our Agile teams — we are all collectively responsible for customer success, and all ideas are valued and considered. Our culture is exemplified by our continuous investment in new and emerging technologies to pursue and master what’s next, and in the full transparency, we provide to our customers, which includes unfettered access to our development environment and tooling to allow for constant situational awareness of status and activities.

FEATURES	BENEFITS
Uses reusable components to minimize new development, which gives developers a “head start”	Reduces time to get usable products to the customer at lower cost; custom development and O&M costs
No licenses or royalty fees	Honest broker focused on providing the right solution to our customer’s domain
Cross-functional staff with varying expertise and experience levels that can be matrixed into projects	Maximizes budget by using SMEs only as needed
Proven and mature Agile development and SecDevOps processes and tools	Increases the speed to deliver new capabilities and embeds quality and security into our solutions
Cleared personnel working in secure facilities	Offers flexibility across classification levels at competitive rates
Two primary locations in Morgantown, WV, and Charlottesville, VA and are building capabilities in other locations	Provides a lower cost of labor (vs. expensive regions such as the NCR)
Enduring partnerships with local colleges and universities (e.g., UVA, WVU, UCF)	Continuous infusion of tomorrow’s talented workforce

## PROVEN SUCCESS

We currently support dozens of customers and diverse industries—from global airbase management to autonomous systems to commercial healthcare products.

### U.S. Government Agency / U.S. Military Branch:

- ▶ Modernized three mission-critical applications for a U.S. military branch in 1/3 of the time estimated by the Government (3x faster)
- ▶ Reduced fielding cycle on mission-critical application from 25 to 4 months
- ▶ Modernized a legacy application in just four months—replaced previous application and reduced mission-critical operator tasks from hours to seconds, resulting in 83% faster performance
- ▶ Replaced and reduced more than 250 user interfaces (UIs) to 80 in a legacy application in under three months, resulting in 68% fewer windows/UIs and a more productive workforce
- ▶ Switched databases on a fielded system in 48 hours, removing license costs, resulting in faster, cheaper operations for the agency

### Commercial Healthcare:

- ▶ Delivered a cloud-hosted healthcare application in less than five months from contract signing, using a SecDevOps pipeline to make healthcare more efficient (better, faster, cheaper)
- ▶ Delivered a new healthcare application in less than three months, resulting in an estimated \$22 million in savings to the hospital in the first year

## WHY PARTNER WITH LEIDOS

Our mission software systems are designed to manage complexity in environments that require security, precision, speed, and scale in equal measure. Our SecDevOps approach puts security first and foremost, and our data-centric design and analytics build secure systems that reduce lifecycle maintenance and development costs. This enables continuous testing of new technologies and accelerated delivery of innovative solutions.

## NEXT STEP

Contact our software development experts to determine if Leidos’ Software Factories is the right solution for your organization.

## ABOUT LEIDOS

Leidos is a Fortune 500® information technology, engineering, and science solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, homeland security, civil, and health markets. The company's 32,000 employees support vital missions for government and commercial customers. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$10.19 billion for the fiscal year ended December 28, 2018.

## FOR MORE INFORMATION

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