



Biometric Solutions

DELIVERING IDENTITY ASSURANCE



Delivering Identity Assurance and Forensic Technology Solutions

For more than three decades, Leidos has been a leader in biometric-based identity solutions. From the original Combined DNA Index System (CODIS) to the Integrated Automated Fingerprint System (IAFIS), Leidos has charted the course both in algorithms and research, delivering solutions at pace with national needs. Whether it's large-scale systems integration, design and development of advanced products, delivering complex services, or performing cloud migrations, we play an active role in programs critical to enhancing preparedness and resilience and advancing national security. Our adept, experienced team takes a big picture approach—seamlessly integrating the best biometric technology to deliver identity assurance and forensic technology solutions.

AT THE FOREFRONT OF BIOMETRICS ACROSS MARKETS

From identifying persons of interest to vetting individuals for access control, Leidos understands the intricacies and impact associated with using a person's unique identity to secure critical missions.

In partnership with the FBI, we delivered the \$1.2B Next Generation Identification (NGI) program. State, local, federal, territorial, and tribal authorities rely on this state-of-the-art, multi-modal biometric identification system. Working together, the FBI

and Leidos delivered NGI on scope, on budget and on schedule. This multi-modal system supports identifiers including fingerprints, latents, palm prints, faces, irises, and scars/marks/tattoos to provide law enforcement optimal flexibility to pursue evidence.

The biometric system of record for the U.S. Department of Defense (DoD), delivered by Leidos, is the Automated Biometric Identification System (ABIS), evolving further to the agency's Biometric Enabling Capability (BEC). This multi-modal system provides DoD forces and other agencies a 24/7/365

NGI in numbers

1K
analyst workstations
supported

18K
law enforcement
agencies served

3K
servers running

1.3M
lines of code in the
initial system design,
in conjunction with

40
COTS* or FOSS**
products

≥10s
reported
transaction
response times for
such applications
as **the Repository
for Individuals of
Special Concern
(RISC)**

300K
per day typical
transaction rates,
and system
throughput is
scalable to be
much higher with
recent cloud
migration

99.6%
fingerprint
accuracy, **up from
the IAFIS true
match rate** of 92%

*Commercial off-the-shelf

**Free and open-source software

authoritative biometric data repository capable of performing more than 45,000 search requests per day. The system supports complex transaction rules and associated interfaces with other national security systems, including FBI NGI, DHS HART, and *ad-hoc* submissions from the Department of State, the National Ground Intelligence Center's Identity Intelligence Analytic Resources, and other external systems. We delivered an integrated capability that converts watchlists into Biometrically Enabled Watchlists (BEWLs) that can be matched on multiple warfighter devices with no connectivity to the DoD ABIS backend system. Under BEC, the system will add voice matching to the existing multi-modal capability of this system deployed in a secure full-cloud environment.

BASE AND BORDER SECURITY

The Automated Installation Entry (AIE) program provides visitor vetting and registration capabilities, in addition to automated gate functions for access to U.S. Army bases in the U.S. and abroad. The system supports traditional access methods using RFID cards and fingerprint readers, and adds a facial recognition component including in-vehicle operation, as well as automated and guard-attended processes. As with all Leidos-developed biometric systems, cybersecurity is paramount to functionality to protect not only the facilities' operations, but also the Personal Identifiable Information of visitors and registrants. The team has provided an online registration capability so that vetting base visitors and subsequent access are smoother and faster from security and operational standpoints. The Leidos facilities that support AIE include a warehouse and test lab, so that advancements can be readily tested, verified, approved, and kitted prior to shipment to the field.

The Customs and Border Protection (CBP) Traveler Processing and Vetting Software (TPVS) program supports more than 58 different software applications and systems underpinning immigration and customs inspections at U.S. ports of entry for a million travelers each day. System availability must be high, as this is a 24/7/365 mission-critical operation for the CBP Office of Field Operations.

As the name implies, vetting is part of the process, and the program also supports automated traveler identification through such innovative programs as Simplified Arrival, wherein 'your face is your passport.' For trusted travelers, the program also supports the Global Entry program, including Global



Entry kiosks and totems, now converting from four finger slap biometrics with paper receipt to face recognition and no receipt necessary. These facial recognition enhancements, which leverage CBP's existing Traveler Verification Service, enable faster, more secure, and hygienic processing of travelers crossing borders at airports, land ports, and cruise ship terminals.

BEYOND BIOMETRICS

The volume of information coming from numerous sensors, systems, and collection methods demands that identity solutions incorporate non-biometric data. Leidos has significant experience integrating biometric and non-biometric data to enhance identity determination and entity resolution. These capabilities include, among others:

- ▶ Surge support for emergent identity-related missions like:
 - Operation Allies Refuge, Operation Allies Welcome (OAR/OAW) to quickly vet and process Afghan evacuations; and,
 - Uniting for Ukraine (U4U)
- ▶ Document and media exploitation including extracted biometrics
- ▶ Open-source intelligence mining for entity association and resolution
- ▶ Non-intrusive inspection capabilities for security at checkpoints and border crossings
- ▶ Difficult operational scenarios, like face capture in vehicles
- ▶ Image-based and descriptive matching of tattoo images using AI/ML.

Global Collaboration

Leidos invests millions of dollars each year in advanced research and development activities involving our people, facilities, and business partners around the world. Our biometric solutions benefit from a deep pool of resources in nearly every scientific field, solving real-world complex issues that impact our customers daily.

The ideas we explore range far and wide as we find new ways to develop and integrate biometric data, devices, and applications—for today and the future.

About Leidos

Leidos is a Fortune 500® technology, engineering, and science solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, civil, and health markets. The company's 45,000 employees support vital missions for government and commercial customers. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$14.4 billion for the fiscal year ended December 30, 2022. For more information, visit www.Leidos.com.

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