

AI/ML CAPABILITIES

Areté is an advanced science and engineering Employee-Owned Small Business that provides innovative sensing solutions — from scientific discovery through prototyping to production. Areté's smart systems include active and passive sensors, real-time processing, software, and complex algorithms that operate from seafloor to space.

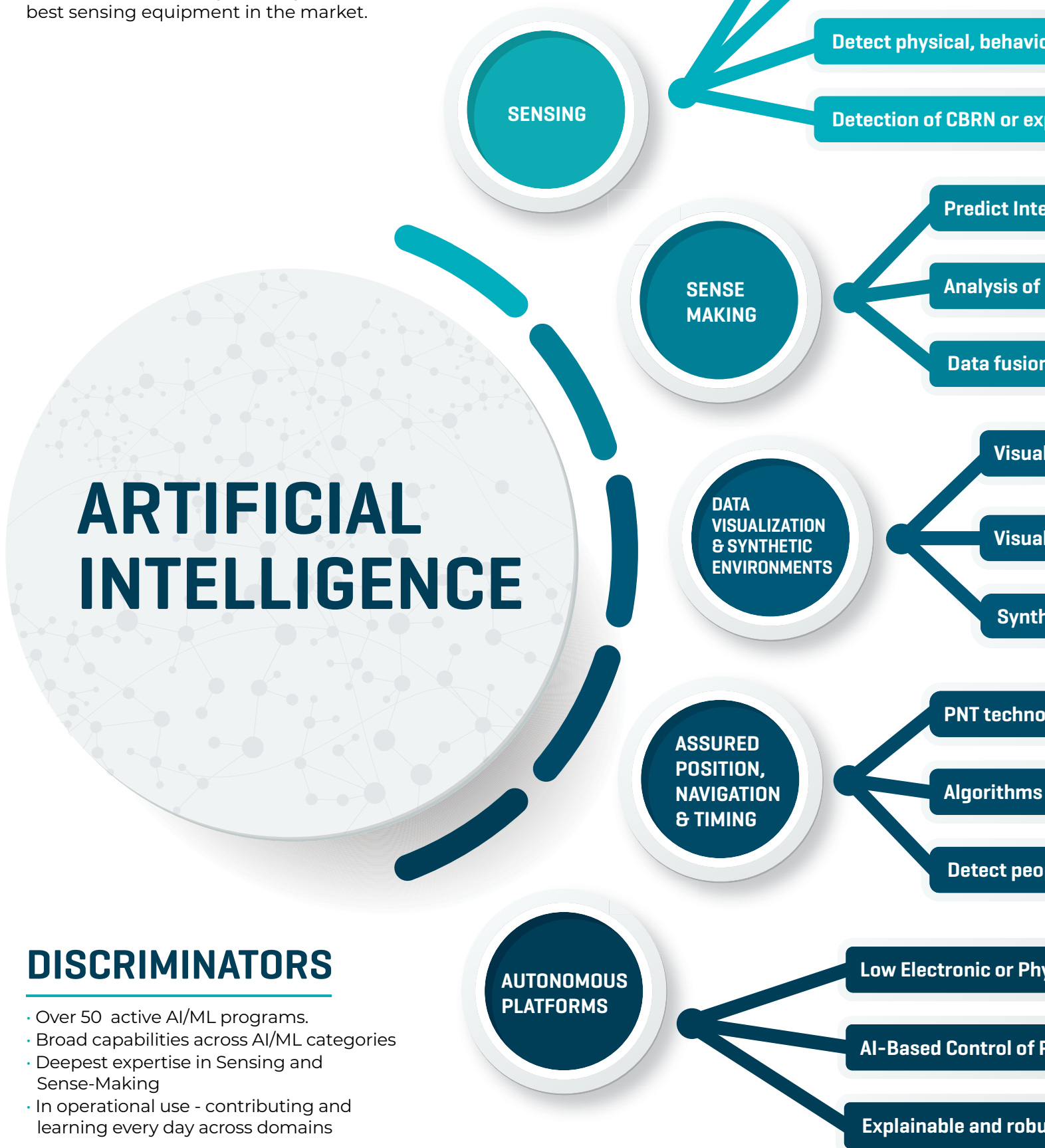


Areté

DISCOVER. DEVELOP. DELIVER.

MACHINE LEARNING

As part of all we do. Our products combine state of the art engineering with machine learning creating the best sensing equipment in the market.



DISCRIMINATORS

- Over 50 active AI/ML programs.
- Broad capabilities across AI/ML categories
- Deepest expertise in Sensing and Sense-Making
- In operational use - contributing and learning every day across domains

Heat Warning

Identification of obscured targets & terrain obstacles

Threat, cyber signatures

Explosive threats

Identify Intent & Behaviors from large, diverse data sets

Identify adversary signal

Identify information from disparate sources

Integration of sensor data and large data sets

Integration of complex multi-source mode data sets

Immersive environments for virtual-live validation of concepts & prototypes

Technologies for operations in GPS-degraded or denied areas

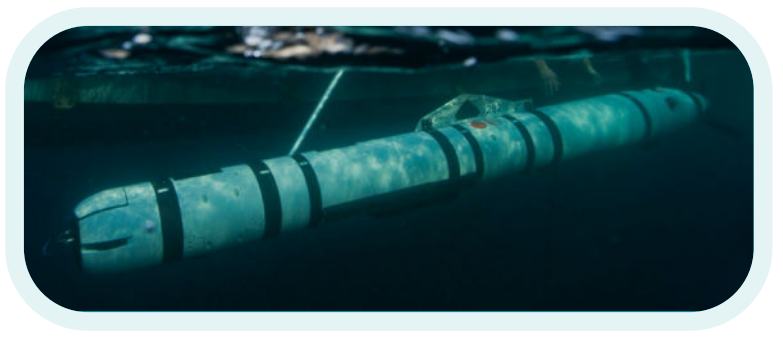
Ability to fuse data from PNT sources

Identify people, equipment, weapons, or other objects

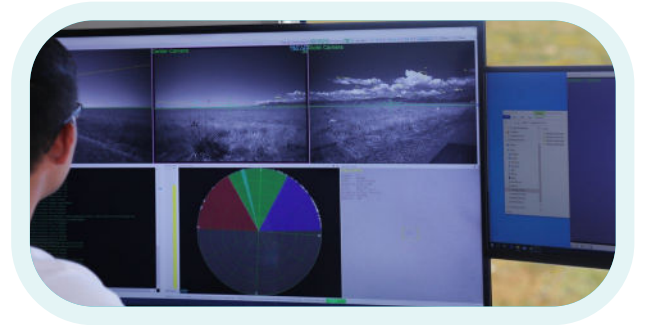
Physical Profiles

Platforms

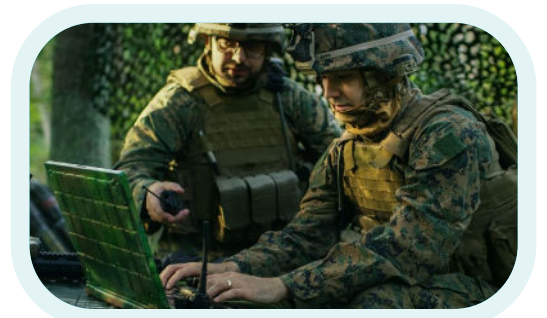
Assist AI



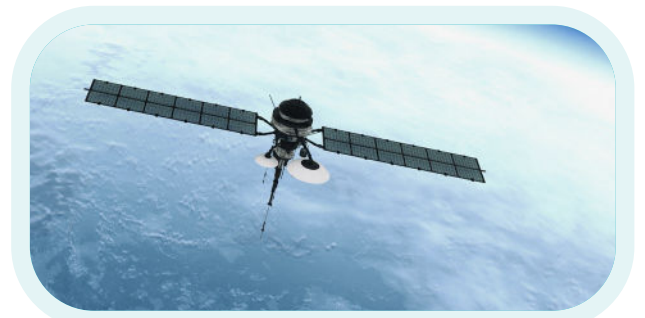
VCM - Video Automated Target Recognition Module



Basilisk - Passive Automated CUAS Sensing



TANDOM - Smart Multi-Sensor Fusion



PreVAIL - Automated Target Recognition and Prediction

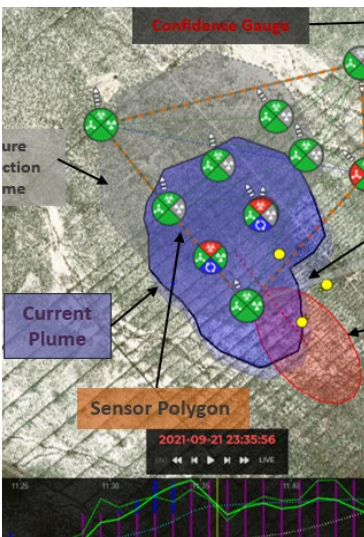


AIMS - Automated Image-Based Medical Sensing for Triage



AIMS – Automated Image-Based Medical Sensing

- **TRL:** 7
- **Production:** Prototyping, integrated into Ascent's Spirit Drone.
- **Discriminators:** Real-time, remote triage, documents injuries from point-of-injury to point-of-care.
- **SWaP:** Software packages on a chip, integrated into any camera – UAV, UAS, fixed site.
- **Status:** SBIR Phase III with U.S. Army TATRC.
- **Description:** Integrated software employing a Deep Neural Network and Computer Vision to remotely locate, characterize, and monitor combat casualties.



TANDOM – Sensor Fusion

- **TRL:** 9
- **Production:** Full Rate.
- **Discriminators:** Sensor Agnostic, Real-Time multi-int sensor fusion for CWMD and Environmental threat mission spaces via standard I/O protocols.
- **SWaP:** TANDOM operates on a range of platforms from low swap processors to cloud installations.
- **Status:** Currently deployed on nine OCONUS locations.
- **Description:** TANDOM is a real-time, tactical software toolkit for enhancing actionable decision making. Providing input agnostic processing, TANDOM captures inputs from sensors, video, and environmental feeds and converts them to context-based information streams.



LiSA – LIDAR for Situational Awareness

- **TRL:** 9
- **Discriminators:** Low Size, Weight & Power, long range (2Km).
- **SWaP:** 10"x 29.5"x 12", 30lbs, 250W max, normal operation 120W.
- **Status:** Full Rate production, capable of higher rate.
- **Operations:** Currently deployed to Europe on MEDEVAC UH-60s and SOCOM MH-47s and MH-60 Blackhawks.
- **Description:** LiSA is a state-of-the-art LIDAR delivering unparalleled levels of real-time situational awareness, especially in Degraded Visual Environments. LiSA also provides wire-strike/obstacle avoidance, and Landing Zone Assessments, reducing pilot cognitive burden and improving safety in all phases of flight.

