

# Intelligent Automation, Inc.

## Company Overview

- Founded in 1987
- Woman-owned small business
- Headquartered in Rockville, MD
- 160+ Professional staff
- \$44M revenue (2017)
- CMMI Level II Certification

## Locations



**IAI is a technology innovation firm that matures concepts to functional prototypes, productizes its prototypes, and commercializes its innovative products through extensive government and industry partnerships**

# IAI Business Model

## Product Development

- Niche or emerging markets
- Leverage R&D programs to reduce risk
- Protect IP aggressively

## Strategic Opportunities

- Broader markets
- Start up/spin-offs with external (angel, VC, etc) investment
- Corporate partnerships

## Transition to Government Programs and Market Leaders

- Partner with Primes including Programs and Services
- Utilize contract vehicles to quickly meet customer needs
- License to market leaders

## Multi-disciplinary Collaborative R&D

- R&D driven by innovation and markets
- Rapidly mature technology to functional prototypes
- Small Business Innovation Research (SBIR) leader



# Core Research Areas

- Advanced Computing
- Aviation and Aerospace Analysis
- Big Data and Social Media Analytics
- Cyber Security
- Education and Training Technologies
- Health Technologies
- Networks and Communications
- Robotics and Electromechanical Systems
- Sensor Systems
- Signals, Analysis and Controls



# IAI Clients, Customers, and Partners

- Diverse set of clients that include several government organization
- Prime-subcontractor relationships with several industry primes and system integrators
- Partnerships with more than 50 universities
- Multiple active contract vehicles to quickly meet customer needs

## Sample IDIQ Vehicles

**ARMY** D3I, TAOSS, ARL CIERO

**FAA** SE2020, SE2025, e-FAST

**NASA** BPA, HHPC, GESS II

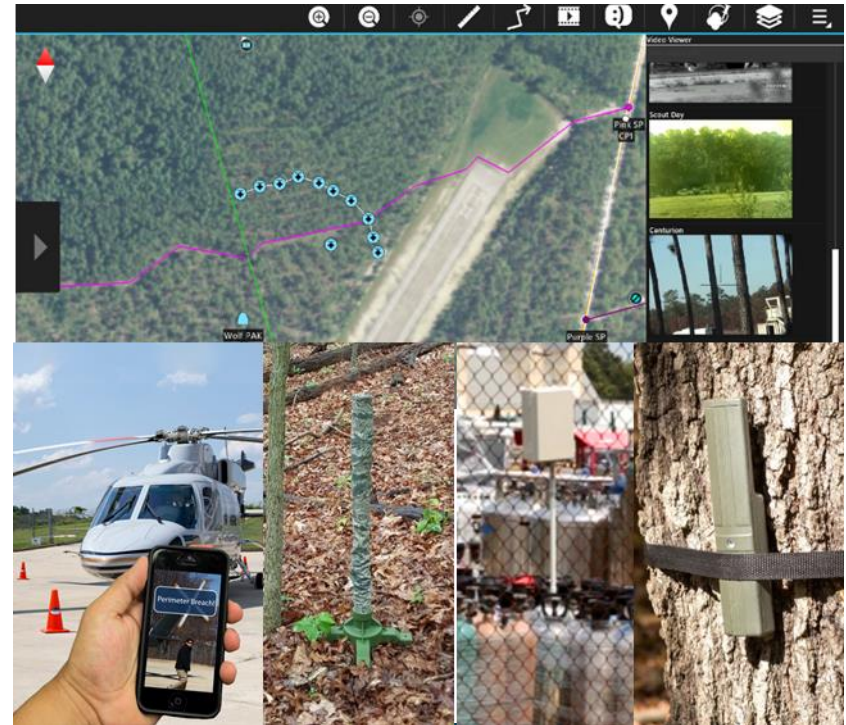
**NAVY** Seaport-E, NRL IT IDIQ,  
Medical Omnibus III



# ARGUS: Perimeter Security System

## Scalable network of RF-based sensors for perimeter security

- Indoor/outdoor operation with foliage and other obstructions
- Dynamically adapts to changes in the environment and weather
- Rapidly deployable/reconfigurable
- Long-term, unattended applications
- Interoperable with existing security networks and peripherals
- Reduces surveillance manning requirements
- Resistant to jamming and spoofing

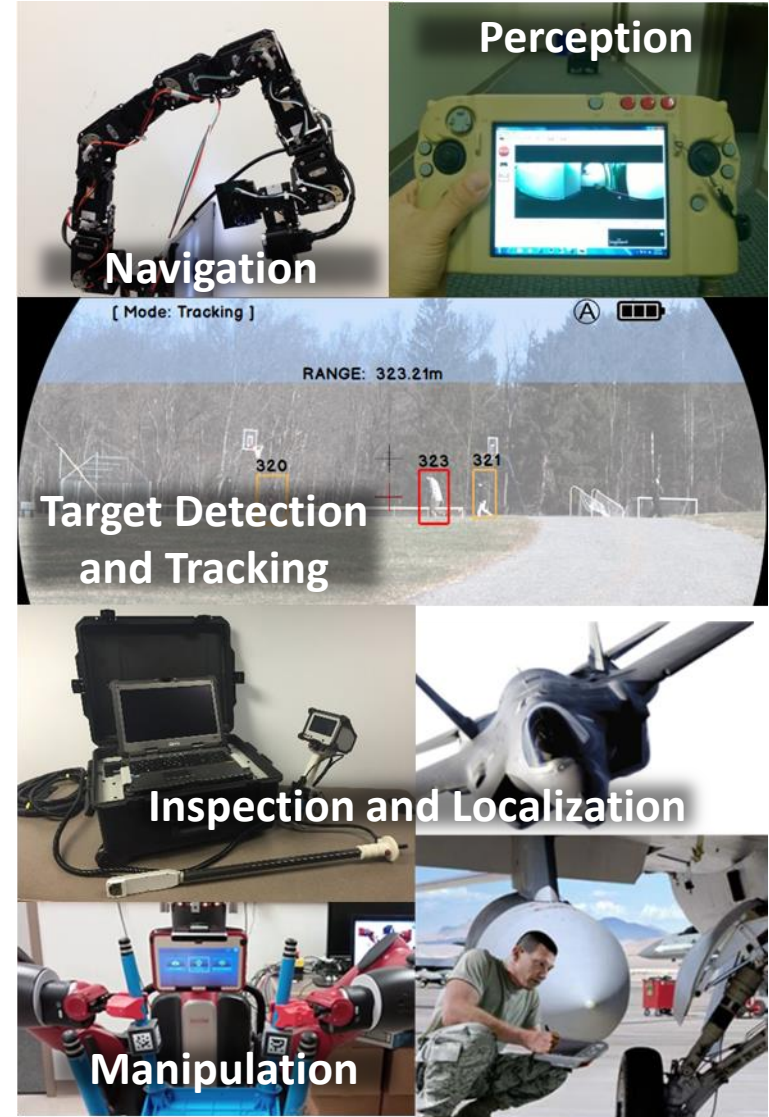


### Ideal for a Range of Applications

- Temporary/reconfigurable protection for construction site security
- Permanent fencing applications providing layered security
- Infrastructure and asset protection

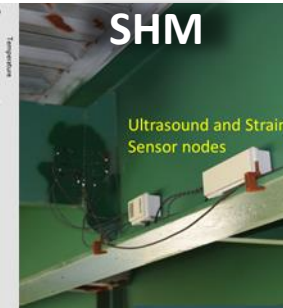
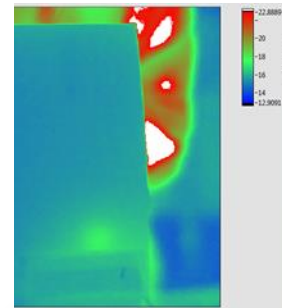
# Robotics and Electromagnetic Systems

- **Machine vision & optical systems** focused on optical design, electro-optic devices, embedded processing, image stabilization, target detection and tracking, and classification.
- **Autonomy & Human-Machine Interface** technology including algorithms for planning, perception, mobility and manipulation
- **Robotic manipulation, inspection, maintenance & repair** with enhanced situational awareness, intuitive control, semi-autonomous behaviors, sliding autonomy, and platform independence
- Market-driven **electromechanical** products and custom design services



# Sensor Systems

- RF Sensors including wideband multi-channel reconfigurable digital transceiver, aircraft transponder/IFF devices, and imaging radar (Synthetic Aperture Radar Imaging, Phased Array)
- Radar waveform (SAR, GMTI) and antenna design and simulation
- Location tracking solutions for GPS-denied environment such as urban canyons or indoor
- Algorithms and hardware for sub-nanosecond time synchronization
- NDE/SHM including ultrasonics, thermography and wireless
- Wire fault diagnostics



# Signals, Analysis and Controls

- **Monitoring and control systems** expertise: automation, adaptive HMI design, optimization and system control.
- Predictive methods and tools to forecast performance and **optimize maintenance**.
- **Advanced machine learning** including clustering, outlier/anomaly detection, classification, recommendation, regression and deep learning.
- Leverage new technologies to improve **transportation** safety, operation, infrastructure and communication needs.

