



Illustrative image created with Adobe Firefly.

# Finding Buried Explosives. Freeing Land. Protecting People.



Seismic Subsurface Object Location and Analysis System

(pronounced “solace”) | In development by GoVentures, Inc. | Patent pending

Landmines and unexploded ordnance left behind by past conflicts continue to kill and maim civilians, block farming, and hold communities in poverty. **The core tools used to find them have changed little in eighty years.**

GoVentures is developing SSOLAS, an early-stage seismic-acoustic sensing approach designed to detect buried explosive threats using different physics than existing tools. It is designed to find what conventional sensors can miss: plastic-cased mines and buried ordnance in difficult soils. The long-term vision is a system deployed by uncrewed ground or aerial vehicles (UGV, UAV), processing data at the sensor, and building a soil knowledge base that improves each survey.

**6,279**

killed or injured in 2024

**57+**

countries with landmine contamination

**80+ years**

of largely unchanged core detection methods

Sources: [Landmine Monitor 2025](#); Evans & Temple, *Journal of Conventional Weapons Destruction*, Vol. 28, No. 1, 2024

## How SSOLAS Works

SSOLAS sends controlled sound energy into the ground and measures how the soil responds. Buried objects change that response in ways the system is designed to detect. Because it does not rely on electromagnetic properties, it is designed to work in conditions that limit conventional sensors: mineralized or conductive soil, metallic clutter, and plastic casings.

**Where it stands:** Technology Readiness Level 2-3, on a 9-point scale, where 1 is basic research and 9 is proven in operations.

**Demonstrated in testing: seismic sensing and edge data processing.**

Field testing in summer 2025 at two farms (Pennsylvania and Maryland) and at Texas A&M's Bush Combat Development Complex (August 2025) covered four soil types. Results support feasibility. *These are preliminary results; further research is needed to establish operational parameters.*

See Gorin et al., EarthArXiv preprint, April 2026.

**What funding would enable (planned):**

- Fabricated sensor units (MIPs) to replace the fixtures used in testing, with designs matched to soil data
- A UGV/UAV deployment system, plus aerial camera and GPS data for site maps
- On-site computing and automated analysis, with mixed-reality maps that show where objects were and were not detected
- Cloud processing and delivery, and over time a global soil knowledge base with AI-assisted analysis

## The Opportunity

SSOLAS is designed to fill a gap, not replace existing tools.

**Explosive Remnants of War (ERW) detection (entry market):** Commercial estimates put global spending on unexploded ordnance (UXO) detection services at about \$2.5B in 2025, and estimates vary widely by source. This is the market as it exists today, shaped by what current tools and budgets can address. It is not a measure of the full need. Estimates vary by source. Demand is rising in Ukraine, the Middle East, and at domestic U.S. military sites.

**Possible further applications, with modified configurations:**

- Infrastructure inspection (bridge foundations, dams)
- Utility and buried asset detection
- Archaeological survey
- Domestic military site cleanup (11M+ acres at nearly 2,000 U.S. ranges potentially contaminated)

**Envisioned model:** data as a service. The provider deploys the system, retains ownership of the data, and the customer uses the information.

**IP:** One non-provisional U.S. patent application filed, one provisional in process, and a continuation-in-part planned.

**Funding pathways:**

- Early-stage investor opportunities
- Federal R&D submissions pending (Department of War, National Science Foundation, National Aeronautics and Space Administration)

## The Team

**GoVentures, Inc.:** Founded in 2002 by two senior professionals with decades of experience in aerospace, robotics, construction, nonprofit leadership, and contract and program management. Vice President and technical lead Barney F. Gorin is a licensed Professional Engineer. Three years in, GoVentures has invested substantial company capital in SSOLAS, and a dedicated volunteer team of technical and business professionals has joined the effort.

**Partners:** Rowan University's Digital Engineering Hub (DEHub) and Nextage LLC are teaming partners on federal submissions.

To invest, fund, partner, or learn more: [goventures.biz](https://goventures.biz) | [team-ssolas@goventures.biz](mailto:team-ssolas@goventures.biz)

**Preliminary field results support feasibility. We are seeking research funders and collaborators to take the next step.**

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