BUILD THE INDUSTRIAL BACKBONE

Scalable deterrence demands an industrial base built to deliver deployable antenna technology *at scale and speed*.

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INNOVATION DEPLOYED

WHY WE MUST BUILD THE BACKBONE

America and its allies are entering an era where space dominance is no longer guaranteed. And while the headlines focus on rockets and AI, the real race is quieter and far more consequential. The next great power competition won't just be decided by tactics, strategy, or orbits. It will be decided by production.

Our adversaries aren't waiting. Much like the U.S., China is investing in satellite megaconstellations like Guowang, aiming to deploy thousandths of spacecraft to blanket low Earth orbit with surveillance, communications, and battlefield awareness. Russia, though smaller in scale, continues to escalate its on-orbit aggression and invest in weaponized space systems. Their ambitions are clear. The infrastructure is growing. And the strategic intent is undeniable.

So we must ask: What does it take to win the next great power conflict in space? It's not just software. It's not just sensors. It's not just orbits. It's domestic manufacturing capability. *Simply put:*

You cannot launch proliferated constellations without proliferating U.S. infrastructure.

And that's where antennas come in. Every satellite has an antenna. They are the eyes and ears that bring constellations to life, the essential infrastructure underpinning every capability in orbit. Every sensing, surveillance, and communication payload depends on them. Whether it's delivering timely intelligence to decision-makers, maintaining persistent surveillance to track emerging threats, or powering secure, low-latency connectivity for operational agility, the physical aperture is where capability becomes operational reality.

Currently, most deployable antennas are treated as exquisite hardware. Consider NISAR, the joint NASA–ISRO synthetic aperture radar mission: a triumph of multinational engineering featuring a 12-meter deployable reflector. It represents the pinnacle of custom, high-performance aperture design. But it also illustrates the limits of that model—a years-long development timeline, complex international coordination, and a system tailored for a singular mission. It is not repeatable. It is not scalable. And it underscores the broader challenge: our space industrial base continues to approach deployables as one-offs, not infrastructure. *That doesn't work anymore.*

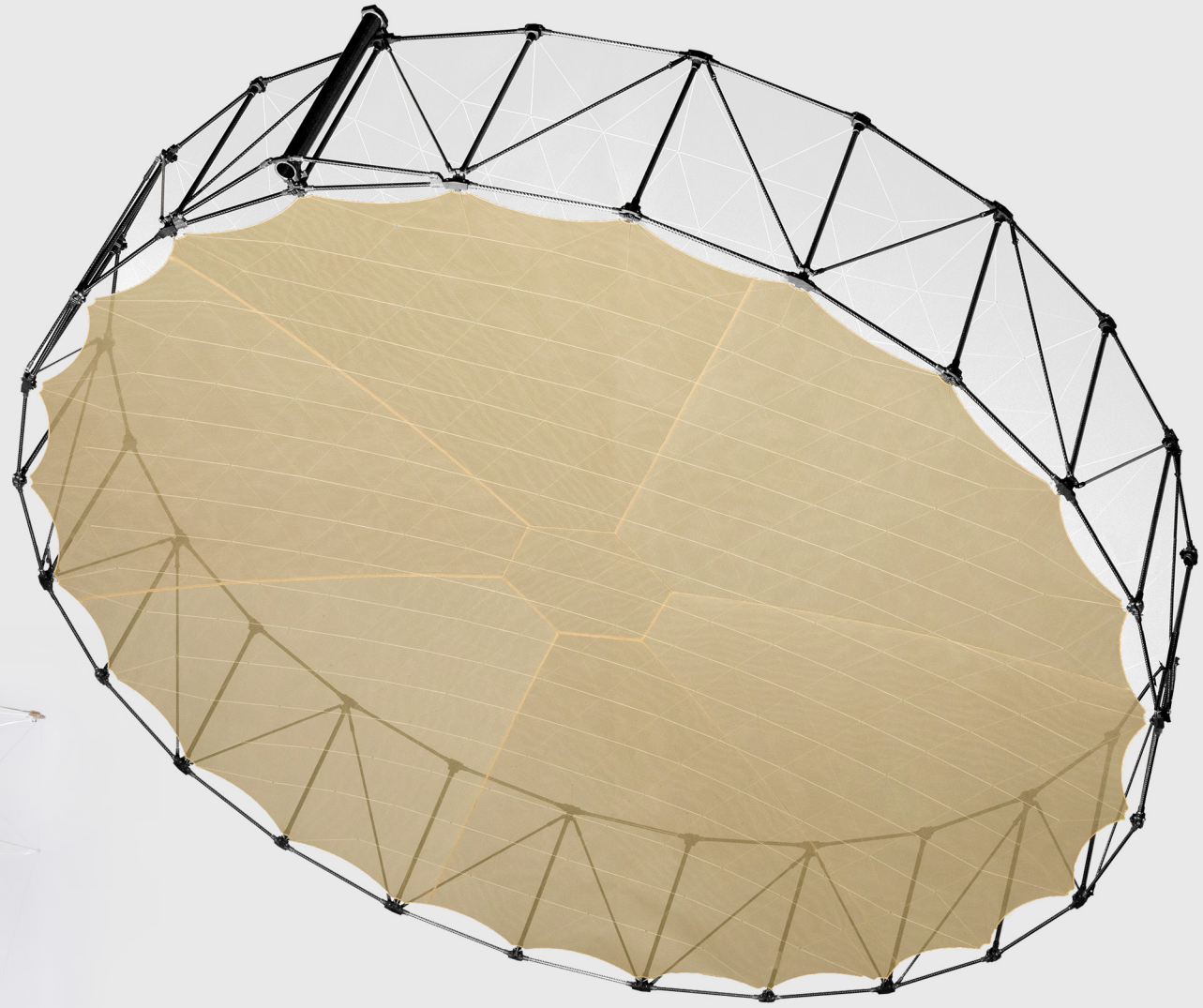
Not when Space Force doctrine is calling for architectures that are resilient, interoperable, and ready to surge. Not when the stakes are this high.

Deterrence depends on an industrial base that can produce deployable antennas at scale. The U.S. isn't lacking in talent, resources, or technical know-how. What's been missing is a standardized production mindset. We have the engineering brilliance. We have advanced manufacturing capabilities. What we need now is the will and the infrastructure to build at scale.

This is what Tendeg is building. We call it **INNOVATION DRIVE.** A dedicated purpose-built facility to mass-produce deployable space antennas. 120,000 square feet. Vertically integrated. Near 100% U.S. sourced supply chain. Built not for prototypes, but for production. At scale. On schedule. And with proven flight heritage on over two dozen deployments.

With INNOVATION DRIVE, Tendeg isn't following market signals, we're answering a national need. We're building the infrastructure required to ensure the U.S. and it allies continue to lead in the contested domain of space.

Tendeg is building the backbone of U.S. sovereign space power.



Unblinking vigilance demands antennas built for constant clarity and precision.

REWRITING THE RULES OF PRODUCTION

INNOVATION DRIVE: *120,000 square feet of vertically integrated capacity, built for scale, speed, and sovereignty.*

INNOVATION DRIVE is the only deployable antenna facility in the U.S. purpose built to deliver at scale, run and operated by a non-traditional aerospace supplier. But its real value isn't in square footage. It's in what the space enables. Built for integration, not isolation, our approach reduces interface friction and simplifies deployment across complex mission architectures. We're not starting from scratch:

We're building on a foundation that is proven.

Twenty years ago, the idea that a private company could build and launch rockets faster and cheaper than governments was considered absurd. Access to orbit was a slow, expensive process owned by a handful of defense contractors and space agencies. Progress was incremental. Costs were accepted as a fixed part of the equation.

Then SpaceX came along. They weren't just trying to make rockets, they were trying to change how space systems were developed altogether. Instead of optimizing around program offices, sub-tier vendors, and legacy workflows, they aligned every part of the organization around speed, learning, and iteration. They broke down walls between design, manufacturing, and test. They brought hardware and software into the same conversation and created standards to common requirements. They built teams that could move quickly.

They proved that when you rethink your structure and processes from first principles, you don't just get better rockets, you get faster innovation. They took an industry where a handful of launches per year was the norm and made weekly orbital missions routine. They demonstrated that when you build with scale in mind from day one, you unlock speed, agility, and resilience - all without decreasing reliability.

At Tendeg, we faced a different challenge. Deployable antennas were widely considered unreachable to build economically or quickly. The prevailing view was that they were too complex, too bespoke, and too expensive. Every antenna was a custom solution—hand-built, high-risk, and high-cost. We rejected that premise.

Instead of treating production as a downstream function, we built Tendeg around the belief that engineering, manufacturing, and test had to be in constant communication from day one. We integrated soft goods, structural mechanics, deployment systems, and validation under one roof. Our engineers sit with production technicians. Our test data flows directly into design cycles. And because we control nearly every element—from knit surfaces to software validation—we can rapidly refine, test, and fly new concepts with minimal handoff or delay.

We are aggressively verticalizing our operations. We're eliminating external dependencies, reducing lead times, and aligning every part of the supply chain with the engineering parameters that matter most. We have minimal reliance on rare earth materials. Our materials strategy is designed for resilience and repeatability, not vendor lock-in. Our woven soft goods are largely characterized and qualified in-house to meet the unique mechanical, thermal, and RF demands of each structural system. This tight integration allows us to move from spec to spool with precision and to rapidly iterate as mission needs evolve.

The results speak for themselves. Over the past few years, we've deployed over two dozen antennas successfully on orbit, on time and ahead of what most believed was possible – at industry best prices. We have developed a portfolio of scalable antenna platforms that can be adapted across a wide range of form factors, missions, and orbital regimes. Whether the requirement is hundreds of units for a constellation layer or a singular, large-aperture antenna, **INNOVATION DRIVE is built to deliver.**

VERTICAL INTEGRATION FOR MISSION ASSURANCE

- **AS9100**
- **Near 100% U.S. Origin Materials**
- **Low Latency Supply Chain**
- **On-Demand Manufacturing**

Knitted mesh	**MADE IN-HOUSE** *(industrial knitter & braider)*
Braided cords	
Electronic boards	**IN-HOUSE DESIGN & DEVELOPMENT**
Control software	
Motors	**ROBUST SUPPLIER NETWORK**
Composite tubes	
Electronic board fabrication	
Hold down release mechanisms	
Machined components	
Vibration	**IN-HOUSE METROLOGY & ENVIRONMENTAL TESTING**
Offloaders	
Reflector surface measurement	
Thermal Cycling and Vacuum	
Testing	

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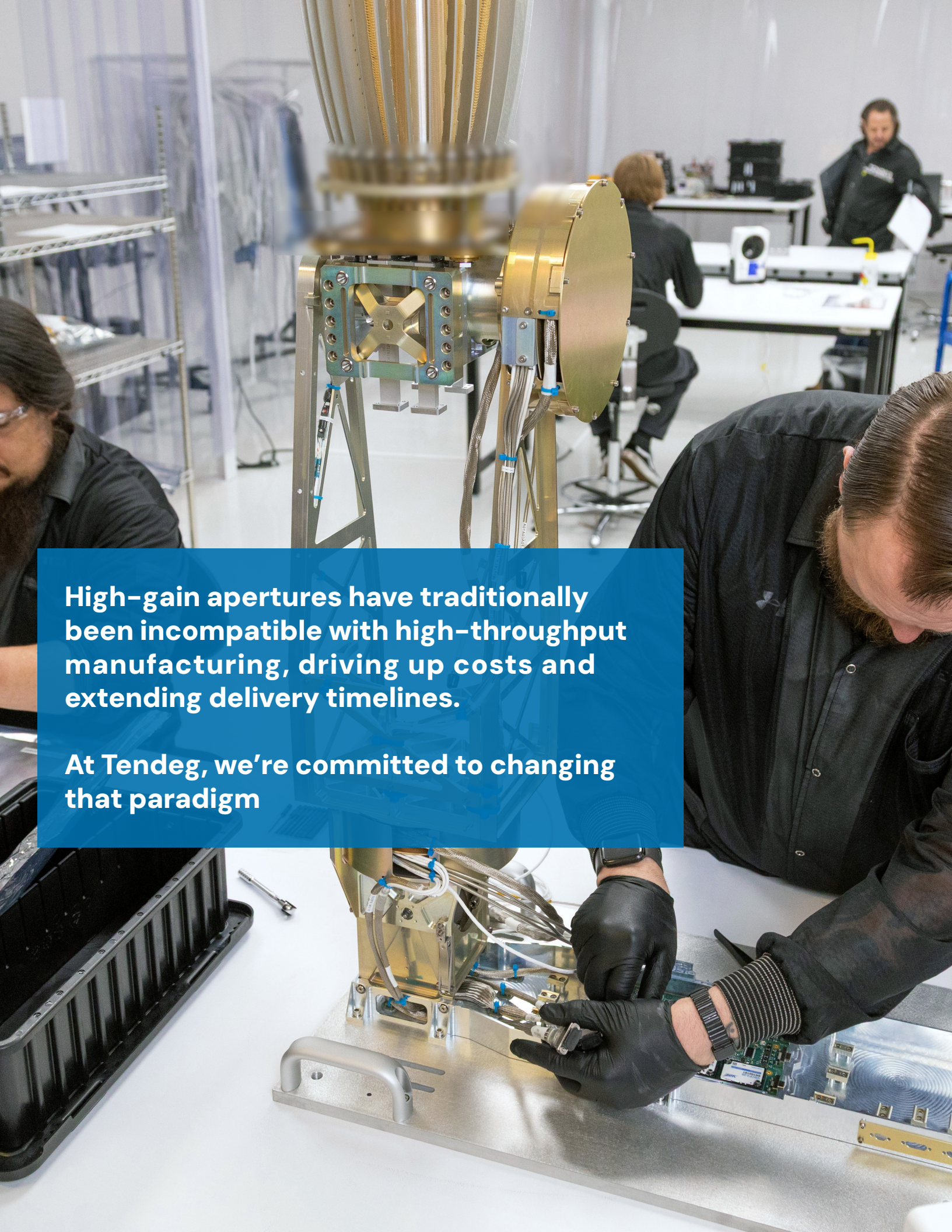

High-gain apertures have traditionally been incompatible with high-throughput manufacturing, driving up costs and extending delivery timelines.

At Tendeg, we're committed to changing that paradigm

A NATIONAL CAPABILITY, NOT AN EXIT STRATEGY

Tendeg isn't chasing valuation. We're building capacity for real hardware and real missions.

To date, Tendeg remains entirely employee-owned and operated. We've scaled through a combination of SBIR awards and traditional financing, not venture capital and private equity. We've turned down multiple offers of outside investment. Not because we lack ambition, but because we understand what the moment requires.

Building the backbone isn't a short-term play. It's not about growth-at-all-costs or optimizing for a liquidity event. It's about delivering strategic national capability on orbit, on time, and with integrity.

We've seen what happens when short-term capital collides with long-term mission needs. Timelines slip. Corners get cut. Leadership turns over. And critical defense infrastructure ends up hostage to quarterly returns. That's not who we are. And it's not what this work demands. We're making a different play:

We believe that the long-term success of U.S. space strategy will depend on a handful of specialized industrial partners.

Companies with the engineering depth, manufacturing discipline, and operational backbone deliver real systems at real scale. That belief drives everything we do at Tendeg. We take on the hardest challenges with equal parts innovation and tenacious work ethic.

Tendeg's in-house industrial knitting machine

THE STRATEGIC CASE FOR ANTENNA DIVERSITY

Antenna diversity is a strategic necessity for the future of proliferated space architectures. No single modality, whether electronic, optical, or physical, can fulfill the complex demands of a resilient, multi-orbit, and mission-driven infrastructure.

Phased arrays have demonstrated strong performance in low Earth orbit (LEO), where rapid beam steering, low-profile form factors, and wide-beam coverage are paramount. Optical links will play an increasingly important role as satellite-to-satellite mesh link requirements grow. But above LEO, into high LEO, medium Earth orbit (MEO), and geosynchronous (GEO) regimes, distinct challenges emerge, increasing link distances, tighter power budgets, thermal dissipation, and sharper gain requirements.

The future of U.S. space security requires a complementary mix of phased arrays, physical apertures, and optical communications.

In these domains, physical aperture size becomes not just a performance variable but a factor that unlocks capability. Deployable antennas offer higher gain per watt and stable, predictable link performance where active steering architectures begin to face fundamental limitations without requiring unsustainable increases in spacecraft power, and electronic complexity.

Physical Aperture Reflector

Built for Range: *Deployable reflectors unlock reliable, high-gain connectivity where phased arrays begin to fall short.*

Deployable antennas present an industrial advantage.

Tendeg's systems are manufactured entirely within the United States and are less reliant on electronic component supply chains that can be impacted by counterfeit parts, obsolescence, or sourcing of rare earth materials. In contrast, many phased array architectures rely heavily on rare earth inputs that are increasingly subject to geopolitical friction and limited domestic sourcing.

As global competition accelerates and production timelines tighten, systems designed to scale without strategic bottlenecks become a matter of national priority, not just technical preference.

The future is not phased arrays versus physical apertures. It is systems that are modular, interoperable, domestically scalable, and operationally resilient, - because they are built to leverage the strengths of each.

Phased Array Antenna*

Optimized for LEO: *Flat-panel phased arrays excel at dynamic beam steering and flexible coverage.*

Optical Laser*

Designed for Interoperability: *Optical laser comms are ideal for secure communication links, including mesh networks and small platforms.*

*Not manufactured by Tendeg

A NEW STANDARD IN DEPLOYABLE SYSTEMS

Smallsat-compatible

Designed to meet the constraints of smaller platforms while delivering high-performance aperture capabilities traditionally reserved for larger systems.

Cost-scalable

Tooling, vertical integration, and standardized architectures enable predictable cost curves and efficient production.

Rapid delivery ready

Integrated manufacturing, modular design, and on-site test capabilities support surge production when timelines matter.

Integration-friendly

Standardized interfaces, validated designs, and controlled test environments ensure efficient spacecraft integration and high confidence in deployment performance.

A REGIONAL ENGINE, A NATIONAL ASSET

Walk through the doors of INNOVATION DRIVE and you'll see something rare: a factory floor where early career techs and PhDs work side by side, building the future of American space infrastructure.

Our production technicians are mastering the tension profiles of space-grade reflectors. Our engineers are refining deployment sequences in direct conversation with test leads. Our loom operators are weaving gold-plated molybdenum wire thread into precision textiles with tolerances measured in thousandths of an inch. Every part of the process is touched by people who are proud to say: We made that. And it flew.

Right now, over 140 full-time employees are working in Louisville, Colorado, and that number is growing. These are high-value jobs, not only for aerospace veterans, but for machinists, welders, loom technicians, quality specialists, and early-career engineers. We are creating career tracks, not contract work.

And when you build a place like INNOVATION DRIVE, you're not just investing in hardware. You're investing in a durable, skilled workforce. In local schools and workforce pipelines. In small businesses and supply chain partners. You are anchoring industrial capability in a community, not in a speculative funding model. But the impact doesn't stop there.

Every reflector we knit in-house, every structure we qualify onsite, every system we build without relying on foreign supply chains, strengthens national sovereignty. This is how you reduce risk. This is how you shorten timelines. This is how you build space infrastructure that can be counted on when it matters most.

America's next great leap in orbital capability won't come from a PowerPoint deck or a pitch to private equity. It will come from facilities like this one. From weld tables and test stands. From young technicians learning to build their first aperture. From a production floor that hums with purpose.

INNOVATION DRIVE is a sovereign capability - built from the ground up in Colorado - to meet the needs of American space dominance.

Tendeg is ready to partner with the U.S. government to secure our nation's strategic manufacturing base and safeguard critical supply chains.

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