APPLIED ENERGETICS

Directed Energy, Anywhere

JUNE 2025

Company Presentation

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ADDITIONAL INFORMATION

Applied Energetics, Inc.'s internet address is www.appliedenergetics.com The company makes available, free of charge, all SEC filings at www.appliedenergetics.com. Its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8- K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, are available as soon as reasonably practicable after they are electronically filed or furnished to the SEC. You also may request a copy of each document at no cost, by writing or calling us at the following address or telephone number:

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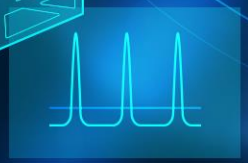
PROBLEM

Widely proliferating threats

Directed Energy, Anywhere

USPL SOLUTION

Optimal size, weight, and power



High value effects

LOCATION

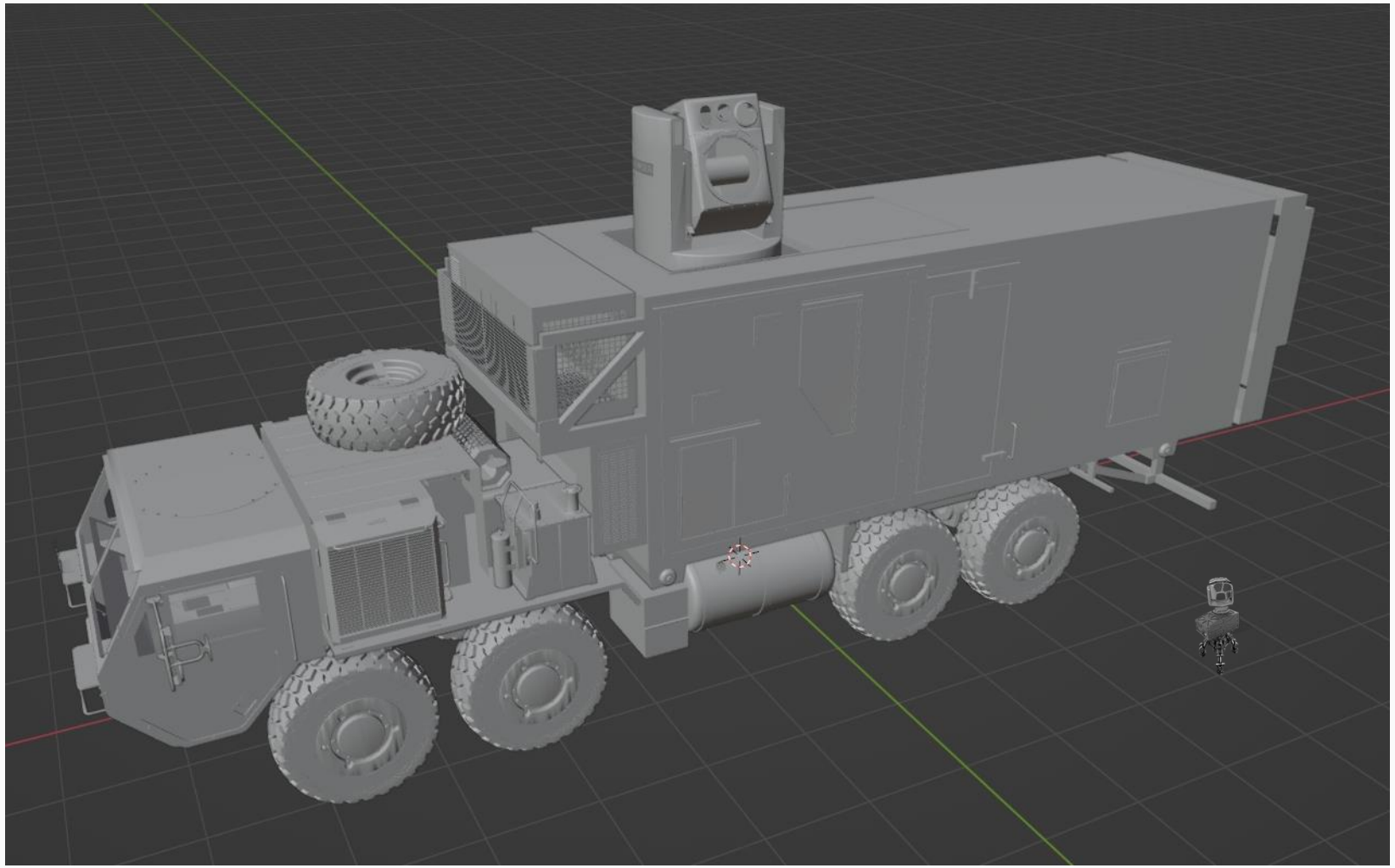
Mobile

Deployed

Fixed
(critical infrastructure)

LOCKHEED HELMTT VS. AE USPL

- AE's Pulsed Laser AIr Defense system (PLAID) has a substantial size, weight and power advantage, enabling a distributed deployment of capability with sub-second engagement performance



BELAYA AIR BASE, RUSSIA

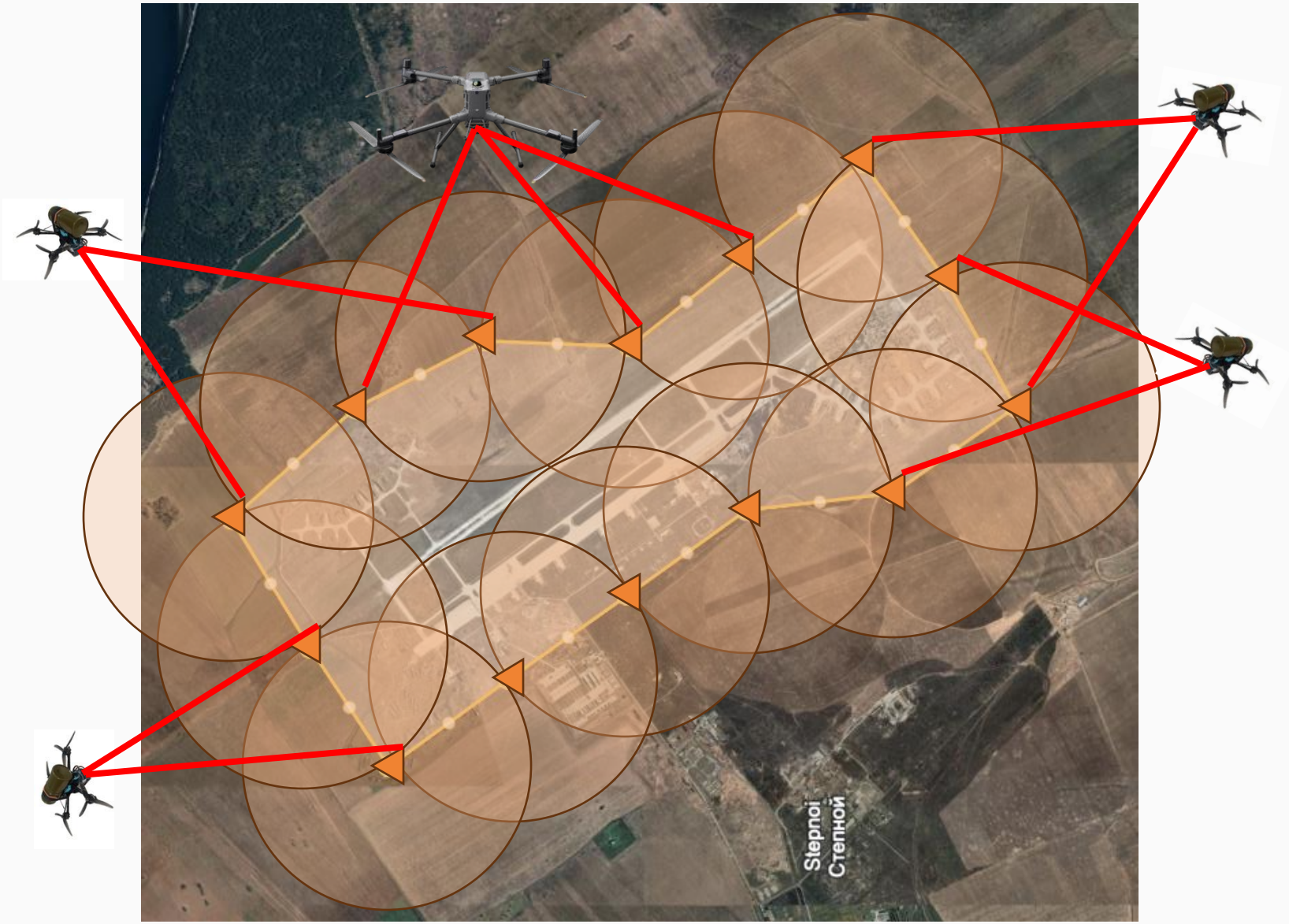
- Belaya is a significant Russian Aerospace Forces Long-Range Aviation base in Usolsky District, Irkutsk Oblast, Russia
- The base's bomber fleet, consisting at various times of Tupolev Tu-16, Tupolev Tu-22, and Tupolev Tu-22M aircraft, played a considerable role in Asian strategy.
- On 1 June 2025, the Security Service of Ukraine (SBU) claimed to have damaged "more than 40" aircraft at Belaya and three other air bases (including Olenya) by using drones. The aircraft included an unspecified number of A-50, Tu-95 and Tu-22 M3 type aircraft. They released footage of the drones striking aircraft on the runway.

AE PLAID EMPLACEMENTS

- Belaya has a roughly 14 km perimeter
- 14 PLAID-L (low altitude) would be placed at 1 km spacing between units to ensure overlapping fields of fire

AE PLAID EMPLACEMENTS; OVERLAPPING FIELDS OF FIRE

PLAID ENGAGEMENT AGAINST DRONES



- Overlapping fields of fire plus sub-second sensor kill allows for a robust engagement scenario where multiple PLAID systems can engage single drones to ensure mission kill.

WHY INVEST IN APPLIED ENERGETICS?

Emerging ISR threats ideally countered by Ultrashort Pulse Lasers

Unmanned semi-and fully-autonomous threats are dramatically increasing in number and capability. These threats are vulnerable to USPL effects with limited time required to defeat ISR sensors.

Unmatched IP portfolio

More than $50 million in public and private capital invested, 26 issued patents, 11 applications held under government secrecy orders, and 8 additional patents pending.

Defense applications open door to commercial markets

Defense applications open doors to commercial markets such as advanced manufacturing, pathogen detection and neutralization, and imaging of biological tissue.

High value directed energy effects at best size, weight, and power in market

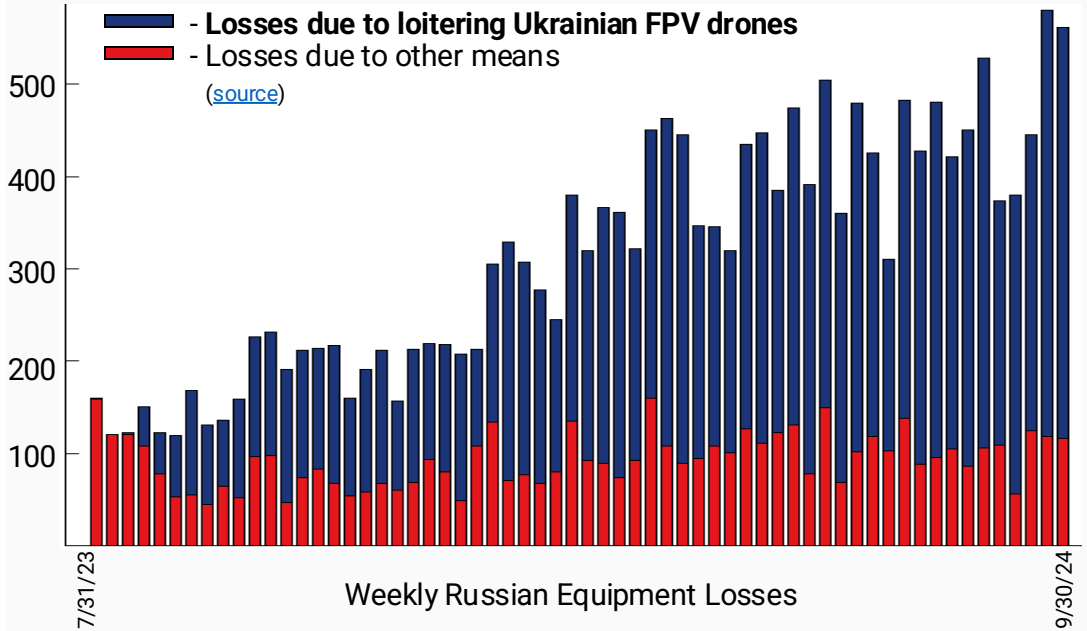
Only national-security focused USPL pure-play; USPLs deliver high-value counter-ISR effects in a SWaP footprint that allows deployment on almost any military platform.

Accelerating addressable market

Global directed energy weapons market expected to grow at 16% CAGR to $32.1 billion by 2033; Counter-Unmanned Aerial Systems (UAS) market expected to grow at 25% CAGR to $11.7 billion by 2032.

Elite management team; state of the art facilities

More than 100 years of combined executive team experience; 26,800 sq. ft. laser-dedicated development and manufacturing facility in the University of Arizona Tech Park.



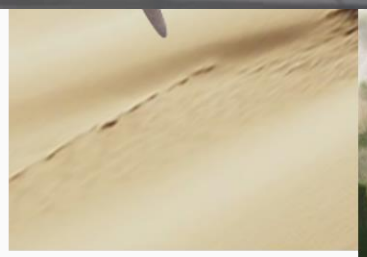
PROBLEM STATEMENT

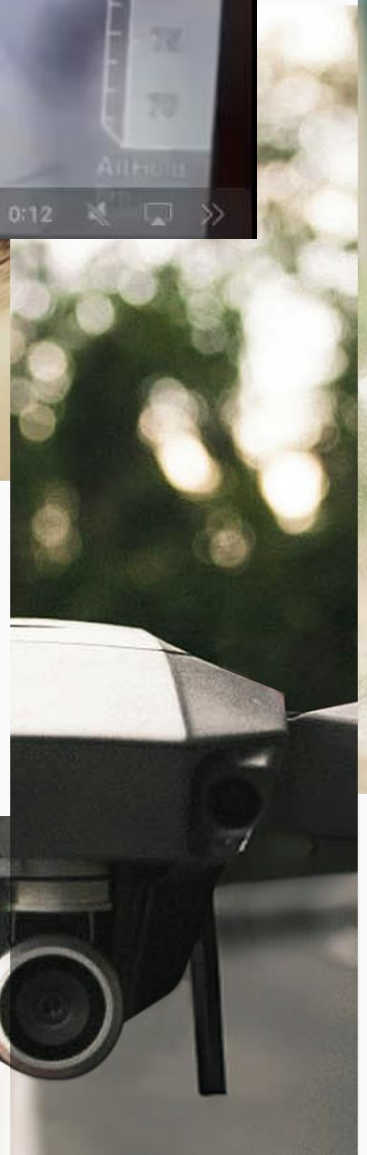
Unmanned semi- and fully-autonomous aerial, ground, and surface vehicle threats are dramatically increasing in number and capability. As unmanned systems increasingly augment humans, sensors will saturate the battlefield.

"The United States defense establishment does not appear equipped, technically or psychologically, to respond to this looming [unmanned systems] threat. I must emphasize—in the starkest terms—**that the comparative advantage in modern weaponry has fundamentally and perhaps permanently shifted toward small, cheap, attritable, evolutionary systems.**"

Dr. Paul Schwennesen

Written testimony before the U.S. House of Representatives Subcommittee on Counterterrorism, Law Enforcement, and Intelligence, Dec 10, 2024 (source)





EMERGING THREATS IDEALLY SUITED FOR DIRECTED ENERGY EFFECTS

The proliferation of commercial-off-the-shelf sensors and unmanned systems are providing both traditional and asymmetric forces with **improved intelligence gathering and improvised threat capabilities enabling low-cost and low-tech solutions against high value targets.**

Most of these threats are piloted through cameras mounted on the vehicle.

SOLUTION: ULTRASHORT PULSE LASERS

Objective: Defeat sensors of all kinds across a broad range of enemy threat platforms.

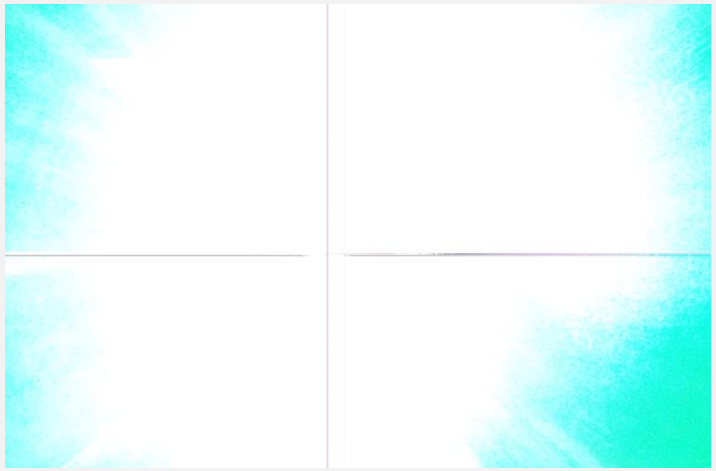
1. High peak power allows for sub-second sensor kills
2. Laser wavelength can be matched to sensor wavelength
3. Common underlying architecture across all counter-ISR applications
4. Efficient, compact, and ruggedized optical fiber-based architectures

ULTRASHORT PULSE LASER EFFECTS: COUNTER-ISR SENSORS

(Effect on common commercial sensor)

JAM

Temporarily blind the sensor

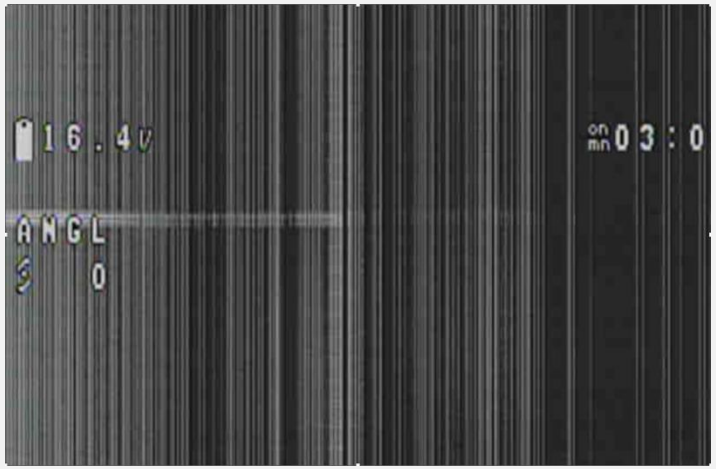


DAMAGE

Permanently damage pixels and control lines

DESTROY

Sensor fails to operate



Increasing energy on target

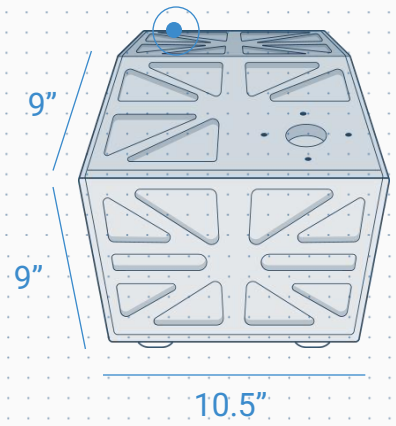
ULTRASHORT LASER SPECS

USPL offers **size**, **weight**, and **power** (SWaP) attributes that enable deployment on almost any platform

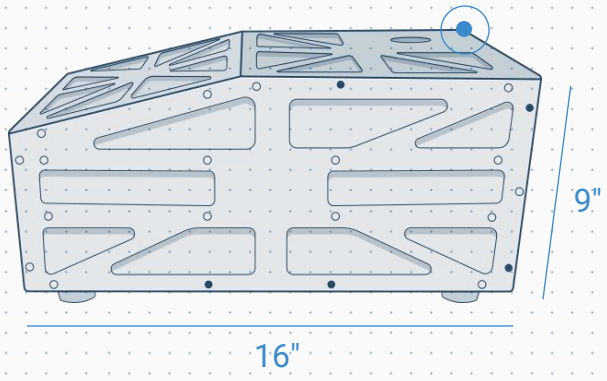
Lighter, smaller, more portable, and provides diversified lethality

SWaP-C reductions by multiple orders of magnitude

WALL POWER 1,000 W

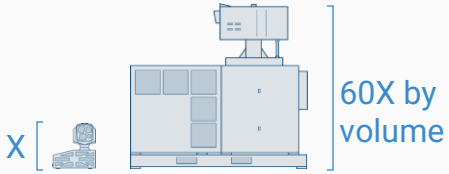


WEIGHT 58lbs (22.6796kg)



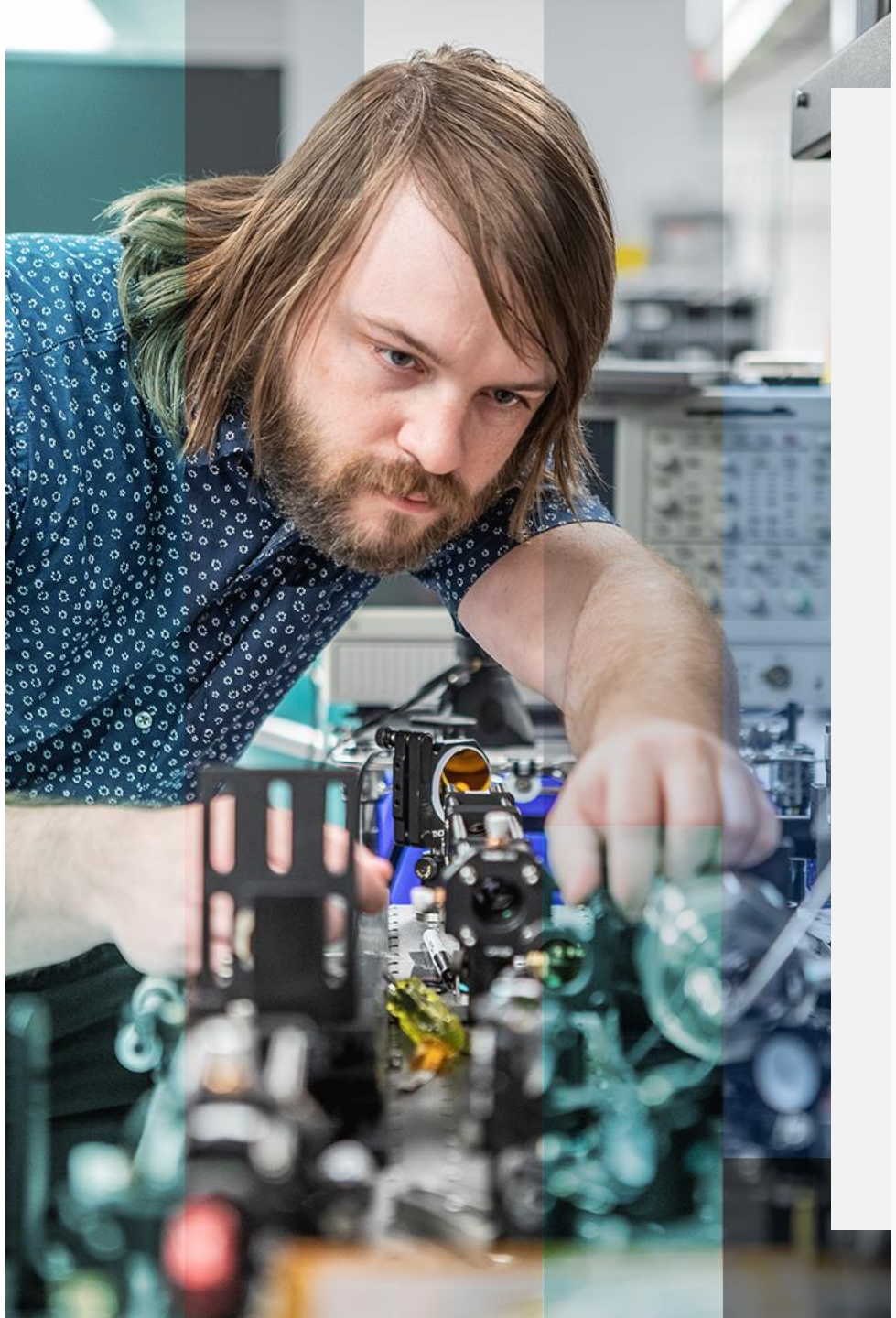
USPL OFFERS SIZE WEIGHT AND POWER ADVANTAGE

ULTRASHORT PULSE



ULTRASHORT PULSE		CONTINUOUS WAVE (CW)
On-the-move	MOTION	Stationary
Uninterrupted	BATTERY	Limited
Compact and modular	FOOTPRINT	Extensive footprint
Peak 10^{10} W	LASER POWER	Peak 20,000 W
~1 kW	POWER CONSUMED	~100 kW
~10s lbs.	WEIGHT	~1,000s lbs.

CONTINUOUS WAVE (CW)



A LEADER IN ULTRASHORT PULSE LASERS

We have built a substantial moat of IP, past performance, and contracts that give AE a **leadership position in the market**

Strong IP portfolio

Over $50M of public and privately funded IP with a portfolio of 27 awarded patents, 11 applications held under government secrecy orders, and 8 additional patents pending.

Proven performance

Designed, delivered, demonstrated mobile USPL platform in the terawatt (TW) – class output for open air testing in multiple environments. 16-weeks from project start to DoD acceptance; modeling and target effects demonstrated.

Mission relevant contracts

Since mid-2022, AE has received three awards each addressing critical customer missions:

Marine Corps
Counter-ISR

Army
Infrared Countermeasures (IRCM)

Navy
Platform defense

APPLIED ENERGETICS

CEO Priorities

NEAR-TERM PRIORITIES DISCUSSION

- Highest priority: On demand demonstrations in AE's Battle Lab (1H25)
  - Initial operational capability in February 2025
  - Expect multiple lasers operating in Battle Lab by mid-year

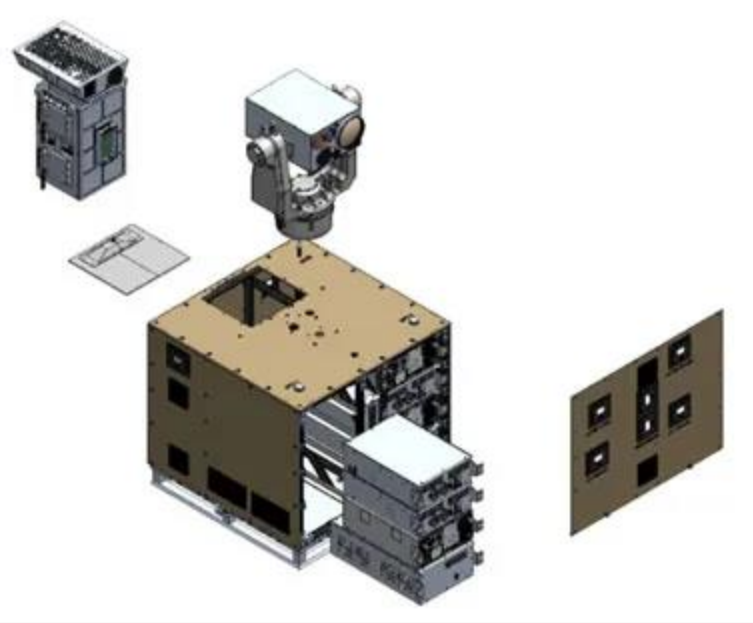
- Kord Firefly platform integration
  - Existing capability already being sold in the market; familiarity to customers
  - Adds capability AE does not currently have organically
    - Support systems: power management, housing, cable/optics routing
    - Command & control: power up/down, laser fire control/interlocks, operator station
    - ISR: target acquisition, tracking, pointing from multi-function gimbal
  - Full system Battle Lab demos (1H25), full system external range demos (2H25)

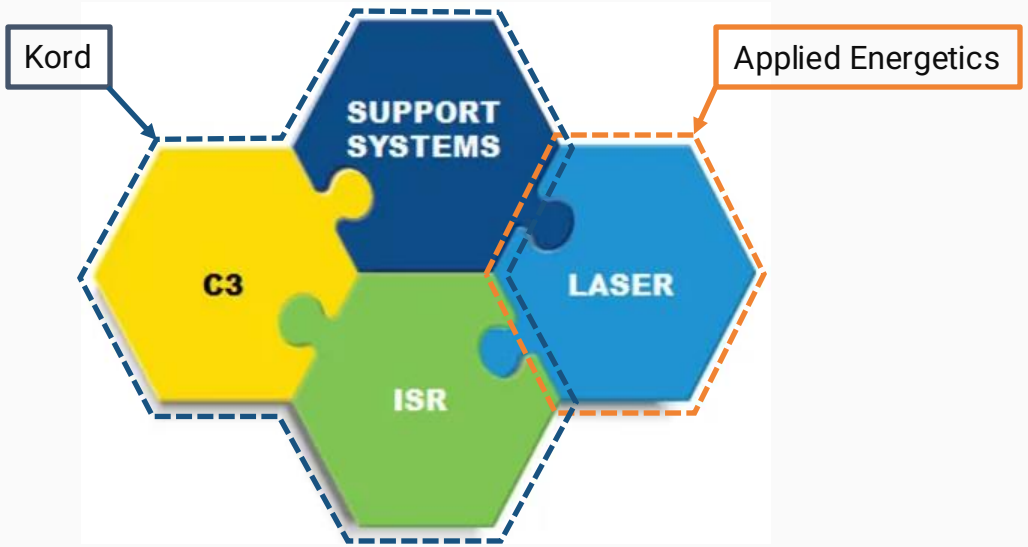
- Increased Staffing: Engineering, administration highest priorities

- Standalone AE prototype development
  - First four prototype subsystem enclosures received

KORD FIREFLY

- Accelerates Applied Energetics ability to do full system integration and testing in preparation for laser productization





OUR PROGRESS

CURRENT APPLICATIONS

FUTURE APPLICATIONS AND INNOVATION

NATIONAL SECURITY DOMAIN

U.S.M.C
C-ISR

U.S. Army
IRCM

U.S. Navy

Rochester
LLE

Advanced applications

Laser guided energy

Core laser technology

Enabling technology and components

Biomedical research and scientific

Advanced manufacturing

COMMERCIAL DOMAIN

LARGE ADDRESSABLE MARKETS

NATIONAL SECURITY DOMAIN

Directed energy weapons. *Source*

$32.1B
By 2033
15.7% CAGR

Counter UAS *Source*

$11.7B
By 2032
24.7% CAGR

Directed infrared counter measures *Source*

$10B
Over next
10 years

COMMERCIAL DOMAIN

Commercial ultrashort pulse laser *Source*

$5.2B
By 2030
15.0% CAGR

Additive manufacturing *Source*

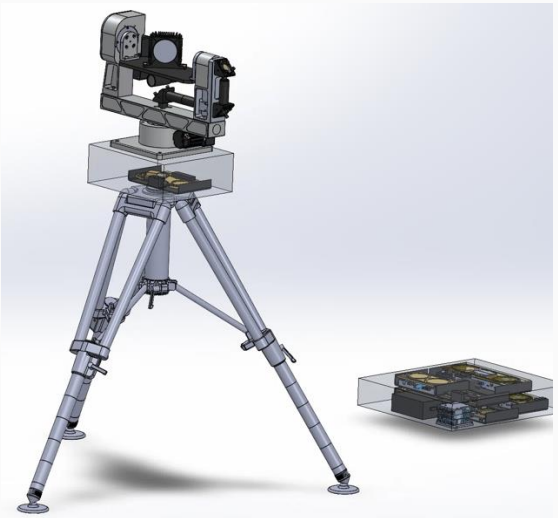
$95.6B
By 2032
20.4% CAGR

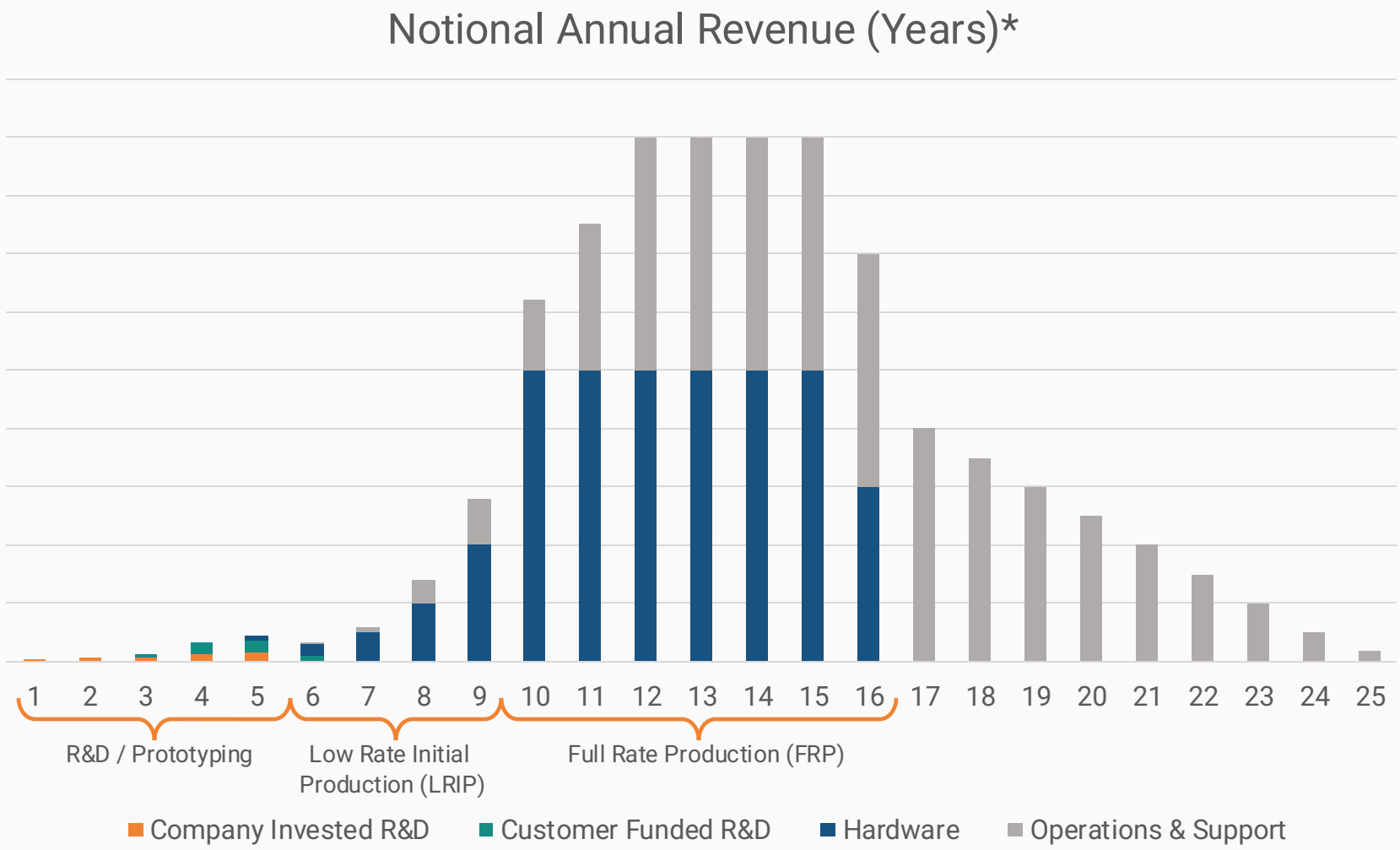
Medical laser market *Source*

$19.9B
By 2032
14.5% CAGR

DOD PROGRAM: NOTIONAL REVENUE PROFILE

- Example program deploying counter-UAS to DoD's Joint Light Tactical Vehicle





*This chart represents a possible forward-looking scenario to illustrate the typical life cycle of a product produced for and procured by one or more DoD customers and is not intended as a specific projection of future events. An actual product revenue profile could differ due to unforeseen variables.

GOLDEN DOME FOR AMERICA OPPORTUNITY

- A successful Golden Dome for American implementation requires an entire pillar of capability specifically build to “take out the eyes” of the things that stare at you. USPLs are ideally suited to achieve this

Why Ultrashort Pulse Lasers?

- **Unique Effects:** USPLs deliver high-peak power, enabling disruption of EO sensors through plasma formation or ablation with minimal collateral effects.
- **Compact and Scalable:** Fiber-based USPL technologies support low SWaP footprints and deployment on land-based mobile, high- to very high-altitude platforms.
- **Wavelength Agility:** Effective across visible to LWIR bands enhancing sensor denial capability.
- **Low Thermal Signature:** Unlike CW or long-pulse lasers, USPLs maintain a low thermal footprint
- **Speed-of-Light Engagement:** Instantaneous targeting of fast-moving threats with sub-second dwell times required to neutralize the target.
- **Difficult to Counter:** Extremely short pulse durations and tunable wavelengths challenge traditional filtering and hardening strategies.

APPLIED ENERGETICS

Thank you