



# High Energy Laser Weapon

**Investor Update Webinar – 7 August 2025**

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Approved for release by the Board of Directors



# Executive Summary

EOS continues to commercialise IP with this A\$125m contract. Laser weapon technology is a significant growth opportunity for EOS

## Drone warfare is driving an urgent market need

- Recent conflicts have proven **small, inexpensive drones** as a formidable **asymmetric weapon**
- Drones can inflict significant damage on much larger and more expensive weapons and assets
- Ukraine's recent Operation Spiderweb saw inexpensive drones causing airbase damage estimated at >\$7bn
- Widening use – as well as Europe / Middle East – drones are now being used in conflicts in SE Asia, North Africa and South America
- **Drone swarms** are becoming larger, more sophisticated and autonomous



## Directed energy weapons are a critical defence layer

- Militaries and law enforcement agencies are **scrambling to deploy effective counter-measures**
- Currently, drones (offence) are winning over the counter-measures (defence)
- Kinetic solutions, such as EOS' Slinger Remote Weapon Systems are attractive to military buyers
- It is widely agreed that **layered solutions** - containing multiple types of weapon – **are essential**
- In this context, directed energy weapons, (e.g. **EOS' High Energy Laser Weapon**) are seen as critical
- High Energy Laser Weapons have **very high accuracy** and **low cost-per-shot**



## EOS' world-first export contract is a significant milestone

- EOS has signed a **€71.4m (~A\$125m) contract** with a **European customer**
- We believe this is a **world-first export** order for a 100-kW for a high power / high energy laser system
- The contract is unconditional and has customary cancellation and termination clauses
- The system will be **delivered over three years**, from EOS' facilities in Singapore
- EOS will manufacture the system and provide extensive testing, training and other services
- Laser weapon technology represents a **significant growth opportunity**



# Agenda

What is driving the market need for high energy laser weapons?

What are the market dynamics for high energy laser weapons?

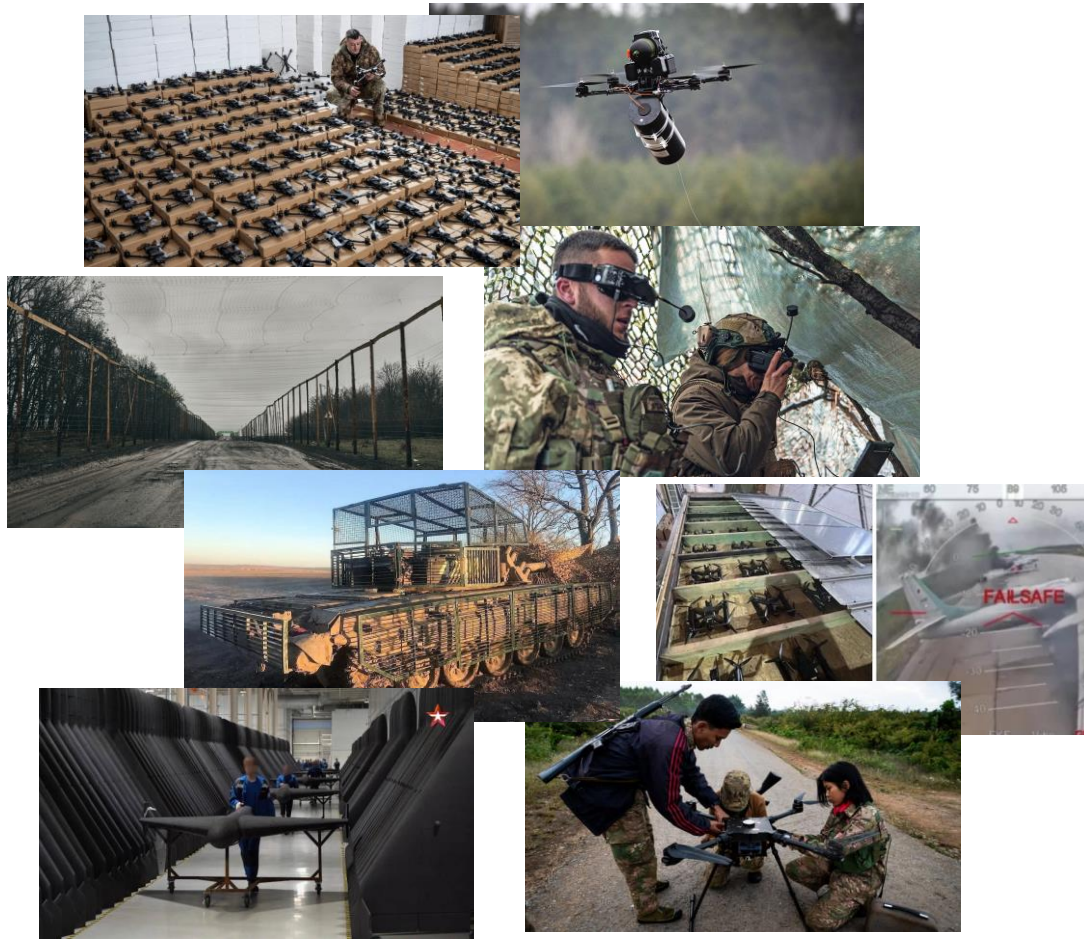
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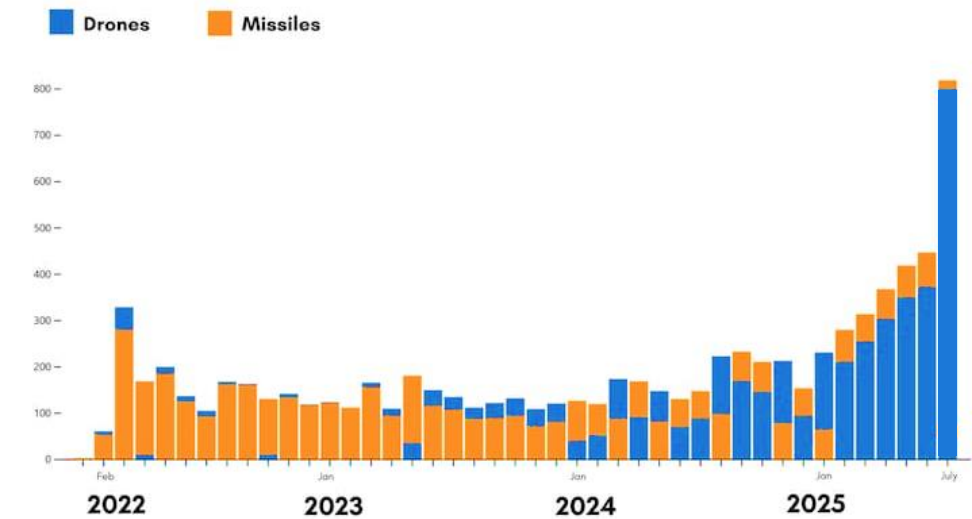


# The Rise of Drone Warfare

**Militaries and law enforcement are struggling to keep up with the drone threat; demand for counter-drone solutions is growing rapidly**



## Russian drone and missile strikes on Ukraine



SOURCE: ACLED (Date: Feb 2022- 9 July 2025)

# Drones Continue to Evolve and Attack a Range of Targets

The trends are expected to continue – smaller; cheaper; more sophisticated/autonomous; greater numbers

## THREATS

GROUP I/II/III DRONES



GROUP IV DRONES



MISSILES



HYPERSONICS



## TARGETS

MILITARY



CIVILIAN





# The Challenge of Defending Against Drones

The rapid rise of drones has changed the battlefield. Defending against drones is challenging. Offence is currently in the ascendant

## OFFENCE: the challenge of drones

### Low Cost

- **Low-cost drones** provide both state and non-state actors the opportunity to disrupt traditionally more powerful opponents
- Drones are an **asymmetric weapon - low cost / high impact**
- **High-value targets** such as military bases and critical infrastructure were historically only at risk from missiles and could be defended by air defence – these are now at risk from drones (e.g. Ukrainian attacks on Russian airbases)
- **Lower value targets** are now also easy targets for drones

### Agile

- Drones move at increasingly **high speeds** and with **erratic** flight paths, complicating defence

### Swarms

- With low-costs, drone '**swarms**' are increasingly prevalent
- This allows attackers to over-saturate and **overwhelm defences**

### Autonomy

- Drones have previously required centralised, human control
- Being used in increasingly **autonomous / sophisticated** ways

### Hardening

- Drones being "**hardened**" to protect against jamming / spoofing
- Emergence of **fibre-optic** cable connected and inertial navigated drones – harder to detect and defeat

## DEFENCE: requirements for effective drone defence

### Accurate

- Due to speed and agility, drone attacks require timely action i.e. defeat the drone quickly or be defeated
- **Accuracy** is critical
- **EOS has proven ability** to develop highly accurate systems, evidenced by its market-leading Slinger RWS

### Economical

- **Missiles can cost millions** of dollars each and defenders can quickly run out of funds against low-cost drones
- Economic realities mean counter-measures need to be economical

### Layered

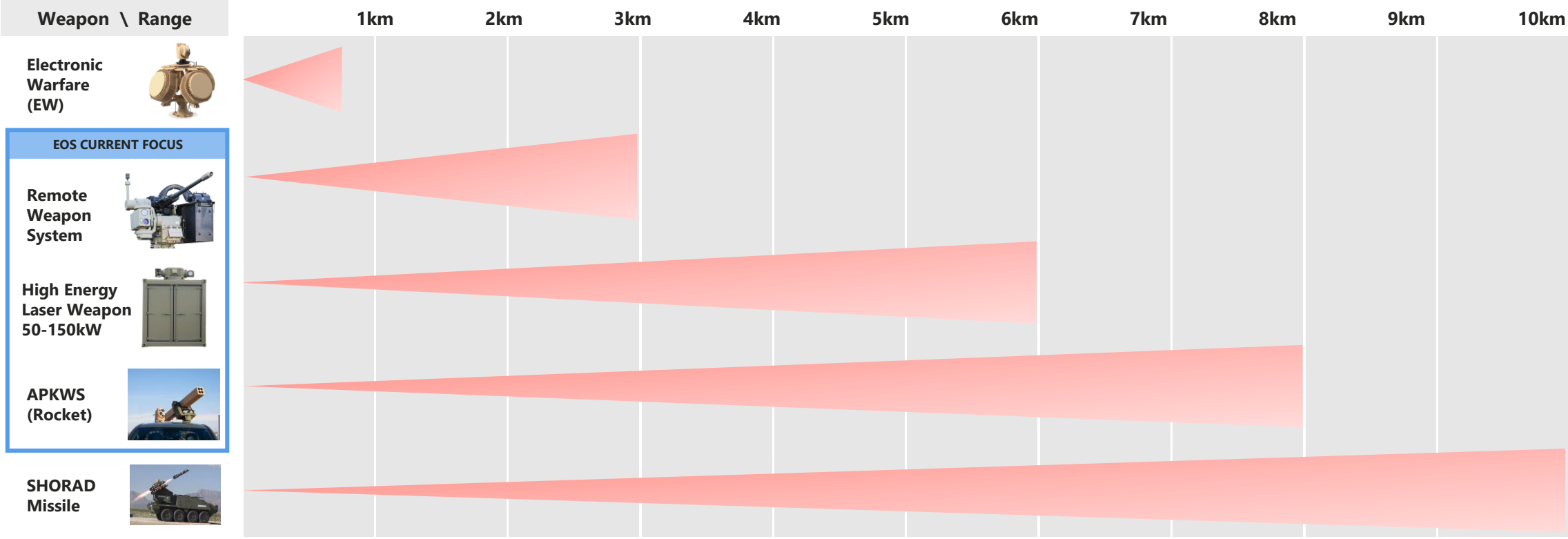
- "Layering" of **different, complimentary** and **overlapping** weapons is required – this is widely agreed
- This allows defenders to address the risk from a distance

### Coordinated

- Defending against fast & erratic swarms **requires too much cognitive load**
- Weapon effectors need **coordinated control**
- Drone **defence will become increasingly autonomous** to respond to threats

# Effective Counter-Drone Strategies Require a Layered Response

The key EOS products are complementary within a comprehensive and layered counter-drone defence system



Rapidly evolving threat technology

Key criteria



Range	Acquisition Cost
Accuracy	Operating Cost
Effectiveness	Cost per Drone Kill

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# High Energy Laser Weapons Product Drivers

EOS is advancing technology in multiple power classes. EOS aims to lead the market for counter-drone laser weapons

## Key Benefits of High Energy Laser Weapons

HELW meet many requirements for drone swarm defence:

### Accuracy

- No impact of gravity or wind

### Speed

- Impact at speed of light, designed for up to >20 kills per minute

### Magazine

- Unlimited ammunition magazine

### Coverage

- Ability to shoot vertically

### Economy

- Very low cost per shot

## Product Classes

- EOS' main commercial focus is presently the 30-150kW power class
- These systems have unique capabilities and competition is modest
- We are developing technologies in other power classes

Laser Power	Use Case	Current Commercial Focus
<30kW	<ul style="list-style-type: none"><li>• Counter-IED</li><li>• Drone dazzling</li><li>• ISR sensor denial</li></ul>	
30-150kW	<ul style="list-style-type: none"><li>• CUAS / Drone swarm kill</li><li>• ISR denial</li><li>• CRAM</li><li>• VSHORAD</li></ul>	
150kW+	<ul style="list-style-type: none"><li>• Air and missile defence</li><li>• CRAM</li><li>• CUAS</li></ul>	

# High Energy Laser Weapons Market Drivers

The HELW market is characterised by urgent customer needs and limited competition

## Customer Needs

- **Drone defence** –for high-value asset protection
- **Supply security** – ITAR-free (no US content)
- **Localisation** – ability to localise IP and manufacturing

## Market Demand

- EOS sees well-funded and **growing customer interest**
- **US Market dominated by large local primes** (>US\$1bn spend pa)
- European, Middle East & APAC market **interest in non-ITAR/non-US product**








## Competitive Moat

- EOS believes it has significant competitive advantages in laser weapons
- Successful laser weapons system required several technically complex subsystems, including optronics, targeting systems, fire control, software design, gimbal design, manufacturing etc.
- Very few companies worldwide have proven expertise across these domains



# Competitive Landscape

Global competition is limited by significant barriers. EOS owns key technologies, a key advantage vs competing teams

			Competitive Threat
	United States	<ul style="list-style-type: none"> <li>Invest &gt;\$1bn per annum in laser weapons, including prototypes for Army, Navy &amp; Air Force</li> <li>Strict restrictions prohibit exports</li> </ul>	Low
	Israel	<ul style="list-style-type: none"> <li>Rafael / Elbit collaborated in the development of 50-100kW class for CUAS/CRAM applications</li> <li>Supported by culture of Israeli technological innovation &amp; success, but limited access to some markets</li> </ul>	Medium
	France	<ul style="list-style-type: none"> <li>Desires to be leader laser technology in Europe</li> <li>Effort is distributed amongst companies such as CILAS (controlled by Safran / MBDA)</li> </ul>	Low
	Germany	<ul style="list-style-type: none"> <li>Long standing efforts by Rheinmetall and MBDA</li> <li>Commercial product not yet available</li> </ul>	Low
	United Kingdom	<ul style="list-style-type: none"> <li>UK focus on naval platforms</li> <li>QinetiQ working on capability over recent years for UK and Australia</li> <li>Recent UK 'Dragonfire' tests with consortium (MBDA, Leonardo and QinetiQ)</li> </ul>	Medium
	China	<ul style="list-style-type: none"> <li>Major Chinese companies offer a 50kW+ system - focused on cost competitive product</li> <li>Unlikely to grow in Western allied/NATO nations</li> </ul>	Low
		<ul style="list-style-type: none"> <li><b>Key technologies are wholly owned by EOS – not shared with partners</b></li> <li>EOS can manufacture independently, without partner reliance, and more easily localise as appropriate</li> <li>EOS is a system integrator with deep technical expertise in key technologies</li> <li>Strategy includes direct sales &amp; partnering with local champions</li> </ul>	

Source: Competitor websites and announcements



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# EOS High Energy Laser Weapon System

EOS aims to lead the global market for counter-drone high energy laser weapons

## Unique EOS Differentiators

- **Scalable** 30-150kW technology, based on Spectral Beam Combining (SBC)
- **Modular and Fixed / Mobile**
- **Localisation** – EOS High Energy Laser Weapon can provide 100% transfer of technology - full localisation if required / appropriate
- **IP rights**
  - Key technology wholly owned by EOS, ITAR-free (no US content)
  - Key technologies in Singapore and Australia for different laser systems
  - Careful management of IP territory – market / opportunity specific
- **Demonstrations**
  - Performance previously demonstrated at live-firings (36kW)
  - Upcoming live-firing exercises:
    - Australia : Q4 2025
    - Middle East : Q2 2026

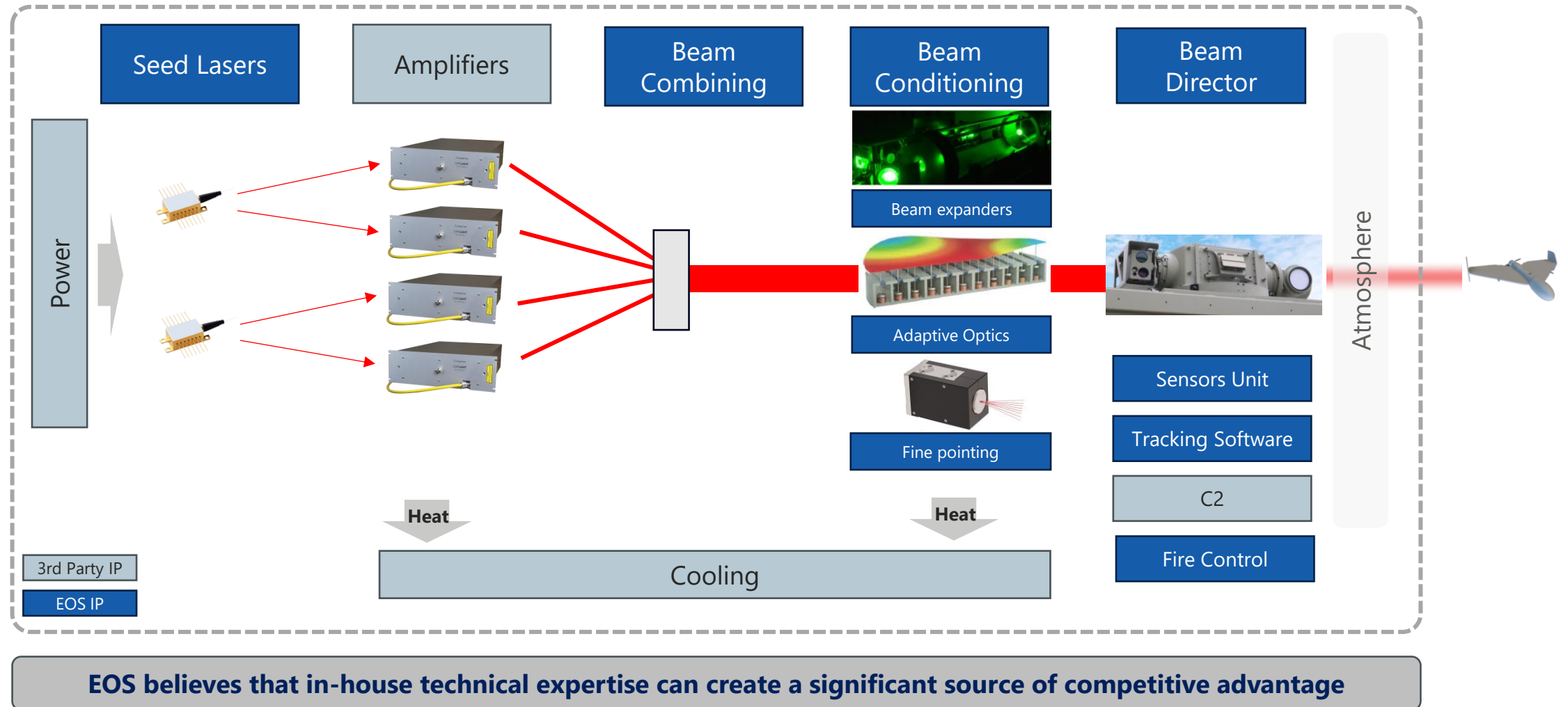
## Product Specifications (100kW)



- 100kW high power laser effector
- Detects all types of drones including fixed wing and quadcopters up to 600 kg (Group 3)
- Battle-proven software
- Common configuration with fielded kinetic kill systems
- Maximum number of stored kills unlimited
- Active optics for atmospheric corrections
- Swarm defeat capable with high rates of target engagement from maximum range
- Minimal collateral damage
- Robust, marinized, qualified
- Deploys rapidly in standard containers
- Elevation/depression +90°/-10°
- Range 2000-6000 m

# Technology Overview

EOS has deep expertise in several complex core technologies and is a laser weapon system integrator





# EOS World-First Export Contract

EOS has signed a €71.4m, (approx. A\$125m) contract with a European NATO member

## Deliverable - 100kW System, including:

- Container module for truck
- Laser modules incl. seed oscillators
- Beam Director and Management System
- System integration into multi-layered air defence system, including testing
- Documentation and Support
- Power and Cooling – local European supply

## Contract

- Price: €71.4m; Duration: 3 years
- Unconditional, with customary termination & cancellation
- Export licence required from Singapore
- Project expected to be profitable and cashflow positive



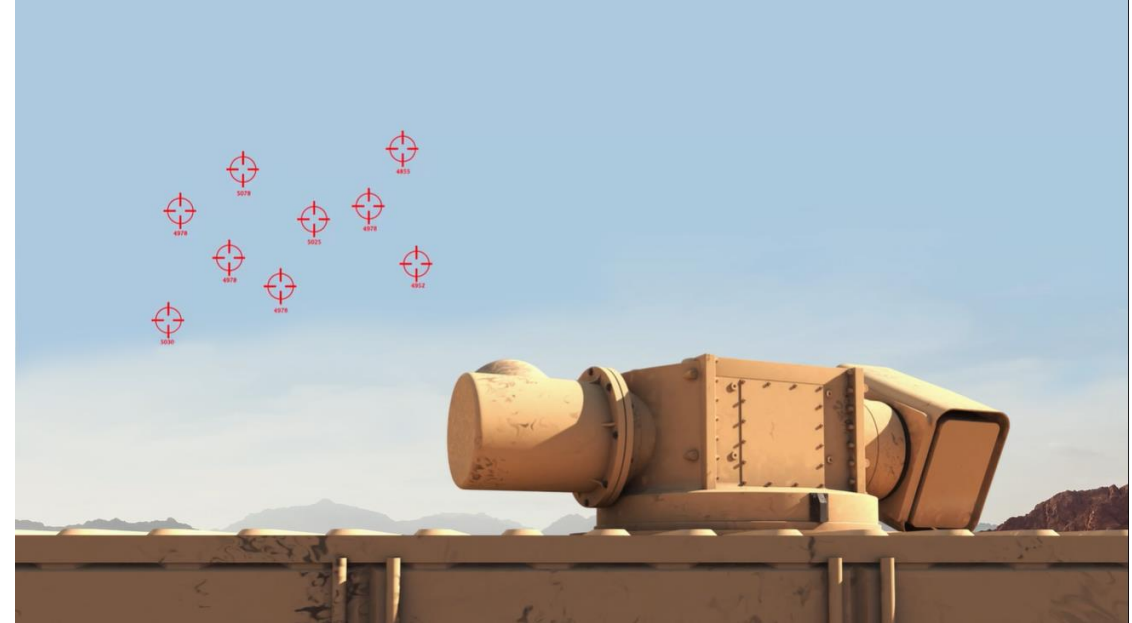
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# EOS Business Growth Plans

EOS is focused on the next stage of business growth – market interest is strong

## Target Markets

- Non-ITAR (non-US) markets
- Europe, Middle East, Asia and Australia

## Market Growth

- Market interest from several countries
- Next demonstrations in Q4 2025 and Q2 2026
- Advanced negotiations with another client
- Ongoing discussions with potential customers

## Facilities

- System to be manufactured at Singapore Laser Innovation Centre
- Canberra Laser Test Facility



**Innovative weapon sales typically have a long lead time – this is a significant barrier to entry**



# Conclusion

EOS is focused on the next stage of business growth – market interest is strong

## Market Need

- Acute drone threat - strong market need
- Directed energy systems seen as critical to future layered systems

## World Leader

- EOS new contract:
  - World-first export contract for 100kW system
  - Successful commercialisation of key EOS IP
  - Critical strategic milestone

## Growth Opportunity

- Market is emerging and growing fast
- Competition is currently limited
- EOS sees this market as a significant future growth opportunity







**Q&A**



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