

# $\Lambda \equiv ROP \wedge R \wedge GON$

CAGE: 8BX36

"Proliferation of small drones is the most concerning tactical development within US **Central Command's area** of responsibility."

Gen. Kenneth McKenzie Jr. 14th Commander, U.S. Central Command





#### How can drones turn the tide of battle?

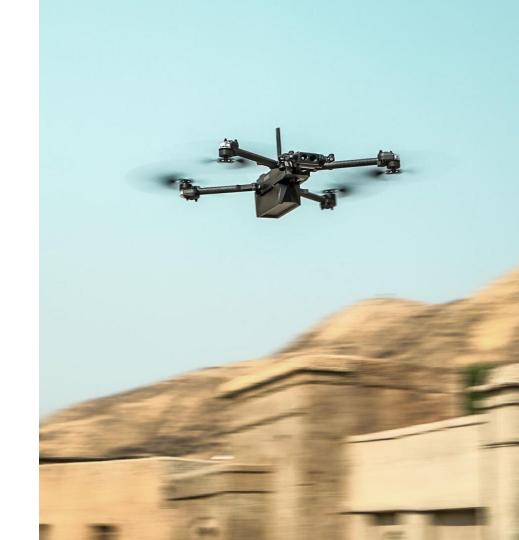


### Skydio

\$2.2B valuation
\$570M in dilutive funding
\$100M 5-year Army contract

# Skydio X2D

- \$11,000 per unit
- 25 mph max crosswind
- 200g max payload
- 36 mph top speed
- 35-minute flight time



### Switchblade (AeroViroment)

- Publicly traded company valued at \$2.29B
- \$446M annual revenue
- Introduced in 2011

### Switchblade 300

- Drops out of sky if unsuccessful
- Heavy, pneumatic
   launcher required
- Slow manufacturing rate
- Heavily ITAR restricted
- Classified as an anti-personnel missile
- 500g claymore payload



## **Custom Racing Drones**

### Custom

- 60-80 mph top speed
- Parts exclusively sourced from China
- No Blue UAS or Berry compliant parts, can't be sold to US Military
- Significant training requirement
- 3-minute flight time



### Problem

**Current U.S. drone solutions are:** 

- Slow
- Expensive
- Lacking modularity
- Not interoperable



# **AeroParagon's Solution**

- Faster than a racing drone
- Cheaper than a gaming laptop
- Modular, 1kg payload
- More nimble than a fixed-wing
- Backwards compatible with existing, custom hardware
- Can be produced in the U.S. or manufactured without ITAR restrictions



### Product

- 140+ mph quadcopter
- Modular with 1kg lethal/non-lethal payload ability
- 12" x 12" x 2" size
- Able to operate in high-wind conditions (60+ mph)
- Non-COTS RF, harder to detect than DJI or COTS hardware
- Current unit cost: \$750
- Expected to sell for: \$3,000
- Goal to become a Blue UAS certified manufacturer

### **Table comparison**

	AeroParagon	Skydio X2D	Switchblade 300
Cost			
Speed			
Maneuverability			
Maintenance			
Durability			
Payload diversity			
Payload size			
Wind tolerance			
System Portability			
Reusability			

### **Dual Use**

- Counter UAS and kinetic UAS intercept capabilities
- Deployment of disposable mesh networks for disaster relief communications
- Rapid delivery of medical aid and life saving devices
- Pursuit of fleeing vehicles and tagging cars with GPS trackers



### Traction

- Concept created at an Army Futures Command Event (<u>link</u>)
- Prototypes funded by NSIN (National Security Innovation Network)
- Demonstrated concept for Texas Military Department, FBI, DHS, Department of Transportation
- Currently in a counter-UAS partnership discussion with MITRE



National Security Innovation Network

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What is one of the most exciting parts of working at NSIN? Seeing innovations from our academic and industry partners come to life, of course!

This week, NSIN Managing Director, Cheryl Ingstad, attended tours at The University of Texas at Austin and the Capital Factory to learn more about their latest projects. See the photos below.



Demonstration at The University of Texas at Austin for NSIN

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## **Next Steps**

Immediate sales to Ukraine:

- No Blue UAS requirement for acquisitions
- Immediate feedback from the battlefield
- Improve training and drone from lessons learned
- >25% sales margin

#### **Create US supply chain:**

- Grant funding/dilutive capital to build Blue UAS compliant version
- Build out US supply chain
- Upgrade drone for RF-denied
   operation
- Sales to the US government

### Team

#### Markus Hogue (CEO):

- Oversees Geospatial Information and Drones at The University of Texas at Austin
- Part 107 certified commercial drone operator
- Has been on USA Today, CBS, HGTV, Fox Weather, along with articles in various magazines, newspapers, and the Chronicle

#### Quinn Buoy (CTO):

- Broke into the semiconductor industry at age of 16
- Background in electronics, PCB design, robotics, cybersecurity, RF, and computing
- FPV Drone pilot of 6 years
- Started in defense R&D after building a 180 mph custom quadcopter

## **Contact AeroParagon**

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- CAGE: 8BX36



### Appendix

### Market

Military Drone Market (<u>link</u>):

- \$11.73 Billion in 2022
- \$30.86 Billion by 2029
- Est. CAGR of 14.8%

Counter Drone Market (<u>link</u>):

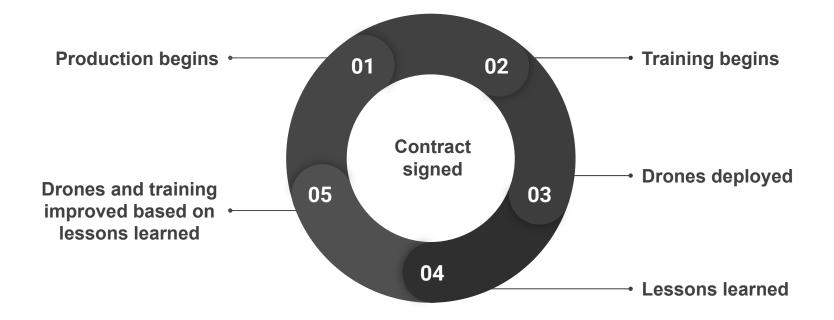
- \$1.43 Billion in 2022
- \$10.5 Billion by 2030
- Est. CAGR of 28.3%



# **Specs (metric)**

- Speed: 220 kph
- Range: 5-8 km
- Flight time: 3-5 min
- Size (cm): 25 x 25 x 5
- Weight (no battery): 450 g
- Payload: 1 kg
- \$3,000 USD per drone
  - Training and pilot kits included per 10 drones
     ordered
  - Cheaper and easier to obtain than sabot tank round
- 4-6 drones per backpack
- Can be flown in 80+ kph wind

## **Ukraine Operational Cycle**



# **Ukraine Deployment Timeline**

<ul> <li>Phase I</li> <li>Order bulk materials</li> <li>Establish production line</li> <li>Finalize training curriculum for Ukraine</li> </ul>		Phase III • 2nd training can • Deliver 20 pilot I • Deliver 200 dror	es	<ul> <li>Phase V</li> <li>Deliver 500 drones</li> <li>Deliver 50 pilot kits</li> <li>Sign next contract for 1000 units</li> </ul>
30 Days	60 Days	90 Days	120 Days	180 Days
		ng camp (1 week), 5 pilots ) drones with for training/testing pilot kits	Phase IV <ul> <li>3rd training</li> <li>Deliver 25</li> <li>Deliver 250</li> </ul>	-

### **Ukraine Production Costs**

BUDGET:	TOTALS:
Labor	\$635,000
Materials	\$1,100,000
Production Equipment/Space	\$390,000
Manufacturing Design	\$240,000
Batteries	\$160,000
Transport/Tariff	\$350,000
Training (3 sessions)	\$125,000
Total	\$3,000,000

## Funding

#### **Seeking \$3 Million in dilutive/non-dilutive funding:**

- Manufacturing line for immediate foreign sales
- Development of a Blue UAS/Berry compliant version
- Training autonomous targeting system for unpiloted and RF-denied operation
- Expected to spend seed funds in 24 months

### **First Year Timeline**

Immediate For	eign Sales	Compliant Manu	facturing
Produce 1,000 nor drones and finish t		Produce 1,000 com Government sales. H develop vision traini	Hire Scale AI to
•	Month 4	•	Month 12
Month 0	•	Month 8	•
	Blue UAS Com	pliance	Future Warfare Experimentation
	Prototype compli encrypted RF, and	ant drone, add I ruggedize further	Begin testing autonomous vision and RF-denied capable hardware

### **Use of Investment Funds**

BUDGET TOTALS	2023	2024	Total
Est. Income	3,000,000 (1000 units sold)	6,000,000 (2000 units sold)	\$9,000,000
Expenses	2,985,000	3,182,000	\$6,167,000
Balance (Income - Expenses)	\$15,000	\$2,818,000	\$2,833,000
EXPENSES	2023	2024	Total
Wages	1,182,000	1,182,000	\$2,364,000
Production	1,688,000	2,000,000	\$3,688,000
Guinness World Record	40,000	-	\$40,000
Travel & Training for Ukraine	75,000	-	\$75,000
Total	\$2,985,000	\$3,182,000	\$6,167,000

# **Drone Capabilities**

Lethal:

- Strike targets with rpg rounds
- Land thermite grenades on tanks
- Carry claymores to push back infantry
- Strike fortified locations with C-4
- Delivery mortar and grenade rounds

#### Non-lethal:

- Electronic, acoustic, and visual distraction payloads
- Delivery of first aid and medical supplies
- Delivery of ammo
- Drop monitoring and radio equipment
- Counter UAS and kinetic UAS intercept capabilities
- Pursuit of fleeing vehicles and tagging cars with trackers



