



The UAV for the next twenty years of DOD operations

Introduction

Last 30 years – War on Terror

- Focus was on the deserts of the Middle East and mountains of Afghanistan



Next 30 years – Pivot to the Pacific

- Focus is now vast distance in-between islands, jungle / tropical setting



Problem: US DOD UAS not suitable for Pivot to the Pacific

Current UAS were designed for wide open desert missions and long-term base operations.



Opportunity: we are early in a 4x a century change in DOD strategy

- A new adversary means new tools are needed to fight a different way
- DOD is spending hundreds of billions of dollars to be able to fight this new fight
- The DOD has a deadline to be ready – **2027**



Solution – a new tool is needed for the new fight

- ✓ Simple to set up
- ✓ Simple and fast to launch
- ✓ Simple to use
- ✓ Packs down to a small size
- ✓ Flies for a long time
- ✓ Can carry a lot
- ✓ Field maintainable



Customer picture
taken during an
ABL Agile Blizzard
exercise

Product – Hybrid Advanced Multi-Rotor (HAMR)



Capabilities

- Rapid deployment
 - Small logistical footprint
 - Easy to use
 - Easy field maintenance (LRUs)
- Hybrid Propulsion enables long endurance
- Sufficient payload capacity
- VTOL – launch quickly with no infrastructure required
- MOSA Platform: modular, open systems approach

Features

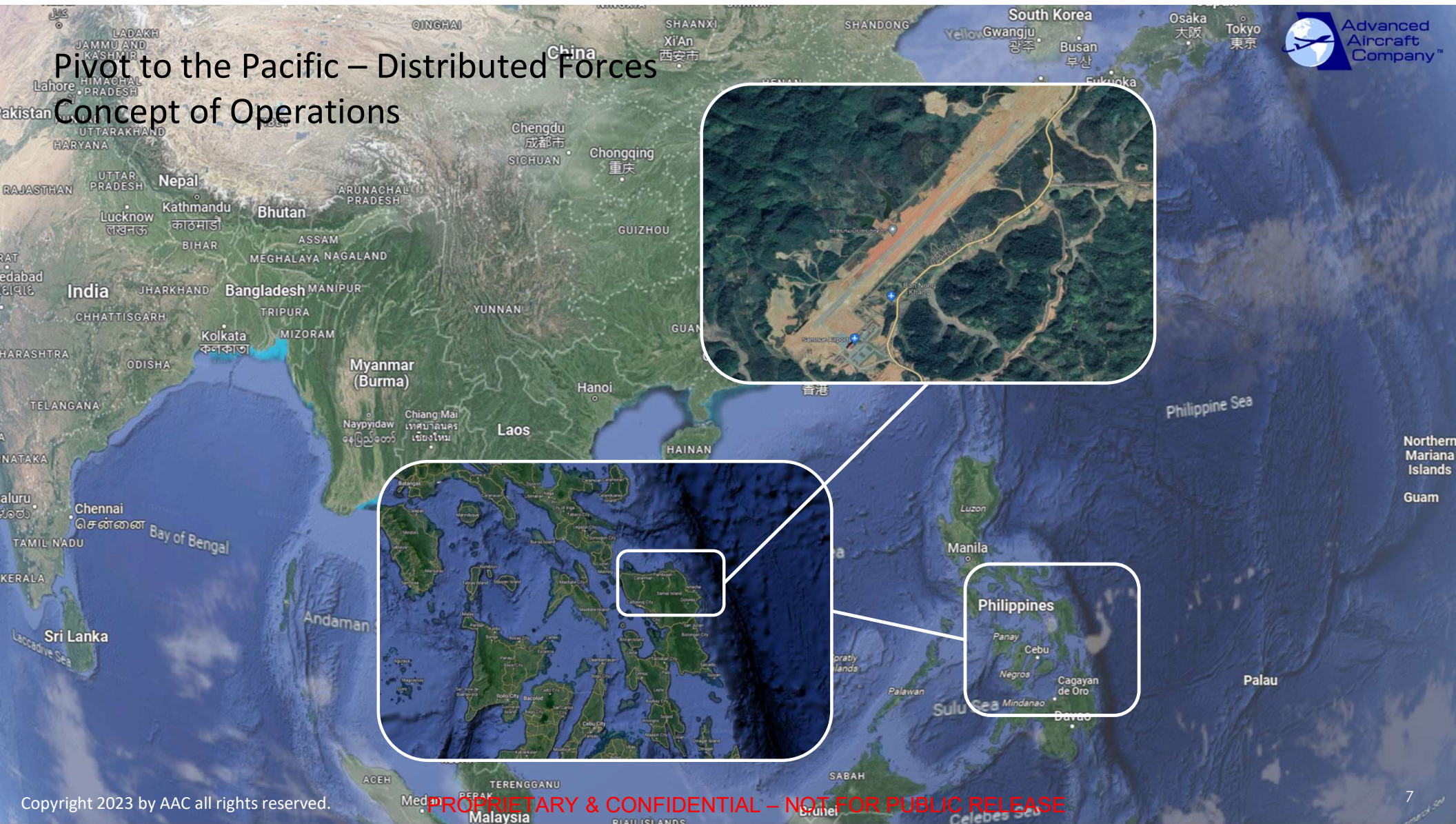
- Onboard mission compute
- GPS-denied navigation
- Suite of Sensors/ Payloads
- Military radio
- Encrypted communications
- Designed from day 1 to be NDAA compliant

Missions

- AI on the edge ISR
- Perimeter security
- Comm node

Air Force is funding the capabilities they need in HAMR

Pivot to the Pacific – Distributed Forces Concept of Operations



Agile Combat Employment/Resilient Basing



Contingency Location Security

- SUAS is the first thing unloaded from cargo plane
- Immediately set up eyes in the sky

<https://www.dvidshub.net/image/7774225/afsoc-total-force-landed-mc-130j-mq-9-10s-mh-6s-wyoming-highways>

SUAS Competition Overview – HAMR

AAC HAMR



Aerovironment Puma



Lockheed Martin Stalker



Skyfront Perimeter 8



VTOL	✓		✓	✓
Long Endurance/ Heavy Payload	✓			✓
Aero Design* (efficiency, wind)	✓	✓	✓	
Field Maintainable	✓	✓	✓	
Incumbent for USAF Agile Combat Employment	✓			

*patented

Executive Team / Advisors



Paul Allen
CEO

Growth Oriented Leader



Boeing/Insitu

- Former Boeing/Insitu Executive
- Sold over **\$1.5 billion** of UAVs worldwide to military and commercial customers
- DOD acquisition subject matter expert
- Vast rolodex with DOD and Defense Primes



Bill Fredericks
Founder, CTO, Chairman

Aeronautical Engineer



NASA Langley

- Designer of the Greased Lightning tilt wing prototype
- Global Subject Matter Expert for tilt wing aircraft



Aaron Frank
COO / CFO

Entrepreneur / Advisor

- CEO, CFO, COO, Advisor



GE Capital

- Director, Bal Sheet Mgt / Data Modeling

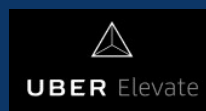
New York University

- Stern - MBA

Advisors

Rob McDonald

- Former Uber Elevate, #10 employee
- Former NASA Langley
- Aerospace PhD – Georgia Tech



Power 10

- USMC (ret.) Aviators
- USMC and US Navy strategy
- USMC and US Navy rolodex



Traction – Air Force Funding HAMR Development



Department of the Air Force (Agile Battle Lab)

Current (\$750K)

- AFWERX SBIR Phase II – integrate EO/IR gimbal, military radio, encrypted comms

Just started (\$1.25M):

- AFWERX Direct to Phase II – mission computer, autopilot, GPS-denied navigation, SAASM GPS, LIDAR

Future:

- Phase III's – Analysis of Alternatives for a Heavy Fuel Engine, AI on the edge – Q2 2024 - (~\$300-600k each)
- Program of Record



Traction – AAC BD Process and outcomes

Our strategy: focused outreach - we meet potential customers in their office

Multiple visits to the Pentagon, Patuxent River, Quantico

Demos to key stakeholders arranged by US Air Force

US Air Force:

- Agile Battle Lab
- Air Combat Command (General Kelly)
- A4 (Directorate of Logistics, Engineering and Force Protection)
- Air Force Security Forces Center

US Marine Corps:

- Combat Development & Integration
- Combat Development Directorate
- Marine Corps Warfighting Lab
- Programs & Resources (LtGen Mahoney)

US Navy:

- Unmanned Task Force: Mike Stewart, Director
- NAVAIR: PMA-263 (Colonel Argobright), Blue Water UAS
- Future Vertical Lift

US Army

- ISR Task Force
- PMUAS
- Futures Command

US Special Operations Command

- 5th Special Forces Group (Aviation)

Revenue Forecast - realistic

	2023	2024	2025	2026	2027
US Air Force SBIR funds	\$ 547,000	\$ 600,000	\$ 350,000		
State Agencies		\$ 2,000,000	\$ 10,000,000	\$ 20,000,000	\$ 40,000,000
Royal Canadian Navy		\$ 10,082,996	\$ 15,124,494	\$ 2,880,856	\$ 2,880,856
US Air Force Unit Sales		\$ 6,481,926	\$ 78,863,431	\$ 90,746,961	\$ 68,060,221
US Marine Corps Unit Sales			\$ 6,481,926	\$ 77,783,110	\$ 90,746,961
US Coast Guard Unit Sales				\$ 9,722,889	\$ 49,694,765
Total by year	\$ 547,000	\$ 19,164,922	\$ 110,819,851	\$ 201,133,816	\$ 251,382,803
				Total \$	583,048,392

Raise and Exit: HAMR

Seed Round

\$3.6M Raise

\$1.8m DOD TACFI

\$1.8m Private Investors

\$16.2M – Pre-investment valuation (\$18M Post)

3 Current investors interested in re-investing (~\$250K-\$400K)

Exit Strategy – Acquisition by a Defense Prime
3-5 years timeline
\$>400M anticipated exit valuation

Primes invest in companies that fill a gap in their strategy

- Capability
- Customer

Make/Buy decisions occur often

- BUY is usually the result
- Primes prioritize minimizing their OH rates

Examples of similar exits

Boeing acquired Insitu – \$400M

- Strategy: acquire a UAS company/platform to be the cornerstone of their fledgling UAS strategy
 - Customer – USMC

AeroVironment acquired Arcturus – \$405M

- Strategy: buy into the potential Army UAS contract Future Tactical Unmanned Aerial Systems contract
 - Capability – AV had products in Group 1 & 2, needed Group 3

Use of Funds – 18 months



Business Development

\$1.1m

- Force multipliers
 - Advisors - \$ > equity in DOD space
 - USMC - Consulting Firm, shape requirements
 - USAF - Consulting Firm, shape requirements
 - Commercial and other sales support
- Marketing / branding/ sales collateral, PR
- Blue Drone List
- Content - renderings, videos, graphics
- Website upgrade
- Demos: UAV + spares + maint/ repair
- Travel, trade Shows



HQ

\$1.2m

- Upgraded secure IT infrastructure and equipment
- Upgraded accounting system
- Legal (patent work, general corp matters)
- Strategic Partnership legal and accounting expertise
- Supplier/Vendor Management
- Rent, insurance, utilities, consortiums, etc
- Software



Acquire Talent

\$700k

1. VP Engineering
2. Software Engineer - architect digital platform
3. HR (recruiting, software, outsourcing)
4. Flight Operations

Questions?

