

Statement of  
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Before the  
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U.S. House of Representatives

Hearing on  
“Fielding Technology and Innovation: Industry Views on Department of  
Defense Acquisition”

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## Introduction

Chairman Rogers, Ranking Member Smith, and Members of the Committee, thank you for the opportunity to testify today on the Department of Defense's (DOD) ability to effectively field technology and innovation. Today, I am pleased to offer my thoughts on the Defense Department's acquisition apparatus from the perspective of a small business transitioning its products from demonstrated operational success to large scale fleet operations. My testimony will highlight a few observations based on my experience and offer solutions that might help this Committee in identifying legislative solutions to speed the process from innovation to adoption.

I am the Founder and Chief Executive Officer of Saildrone, a U.S. company based in Alameda, California, with locations in St. Petersburg, Florida, and Washington, D.C. Saildrone is the world leader in providing oceanographic and C5ISR<sup>1</sup> solutions with autonomous uncrewed surface vehicles (USVs). Saildrone USVs have sailed more than 1.6 million nautical miles and spent over 46,000 days at sea collecting met-ocean, sea floor mapping, and maritime security data.

Saildrone USVs are: (1) primarily powered by wind and solar energy for propulsion and power; (2) scalable in size, ranging from 23 – 65 feet; and (3) purpose-built for myriad applications, including meteorological and oceanographic data collection, ocean mapping, maritime domain awareness (MDA), and intelligence, surveillance and reconnaissance (ISR). Saildrone currently employs more than 250 people and has deployed operationally with NOAA, the U.S. Geological Survey, the U.S. Coast Guard, U.S. Customs and Border Protection, the National Geospatial-Intelligence Agency, the U.S. Navy, and the Defense Intelligence Agency.

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<sup>1</sup>Command, Control, Computing, Communications, Cyber, Intelligence, Surveillance, Reconnaissance and Targeting.

To build its drones, Saildrone leverages the U.S. defense industrial base with ship manufacturing in Alabama, Mississippi, Washington, and our own facilities in California.

Saildrone data collection is cost effective and high quality as verified by U.S. government customers. As the only small autonomous USVs capable of long-endurance maritime domain awareness (MDA) missions, the technology is extremely mature and recognized as Technology Readiness Level-9 by our government customers. Saildrones are provided either as-a-service under a contractor-owned, contractor-operated model or as a fully acquired system with contractor logistics support. In both cases, the USVs are piloted and maintained by Saildrone while the customer has direct access and secure control over the data flow from the vehicle. Maintaining the sustainment and logistics of the fleet allows us to “iterate while we operate” and rapidly respond to customer feedback.

Saildrones utilize machine learning and artificial intelligence to deliver autonomous, real-time visual detection of targets, including those that are not otherwise transmitting their position. These images are fused with radar, automatic identification system (AIS), and acoustics to deliver a fully informed picture of the surrounding maritime domain and enable targeting for other lethal assets. This results in a persistent, rapidly scalable, low-cost solution to augment traditional manned maritime fleets.

### Rapid Innovation Through Operational Experience

Saildrone has operated continuously for the Navy for nearly three years, leading to rapidly evolving solutions based on operational experience. This includes deployments to the CENTCOM, SOUTHCOM, NORTHCOM, and INDOPACOM areas of responsibility (AORs), providing maritime domain awareness where the availability of traditional manned ships has

been limited. Since 2021, saildrones have detected and classified many thousands of surface vessels in key areas of interest, allowing the Navy to greatly enhance its common operating picture while keeping sailors out of harm's way.

Saildrone began its testing with the Navy in December 2021 while assigned to Task Force 59 in CENTCOM. During that deployment, two fleets of Saildrone Explorers were stationed in the Persian Gulf and Red Sea to monitor surface traffic in a real operational environment. With our first iterations of cameras and sensors, we demonstrated the ability of an autonomous sailing platform to provide persistent coverage and reporting of surface contacts to watchstanders in near-real time. What began as a test, quickly evolved into a persistent operational capability bolstering maritime domain awareness for NAVCENT. Now with the enhanced Voyager class, Saildrone has operated in the CENTCOM AOR for nearly three years.

Operational success in the Middle East led to expansion into the SOUTHCOM and NORTHCOM AORs last year. There, a fleet of Voyagers has provided maritime ISR for counter trafficking operations continuously since September 2023. Quarterly reviews by the Office of the Undersecretary of Defense for Intelligence and Security (OUDSI) throughout the mission reported that saildrones were responsible for 96% of all surface contact detections in and around the Windward Pass and the Florida Strait with a 95% cost reduction relative to the daily operational cost of a Navy destroyer. Put another way, for the entire daily rate of one destroyer, Saildrone could provide complete maritime ISR coverage along every major Caribbean trafficking route to the United States. As in CENTCOM, our platforms have provided a decisive operational advantage in an area where demand for manned resources is high and availability is scarce. I am pleased to report that we will be doubling that fleet and expanding into INDOPACOM with additional drones this year, enabled through the DIU's fielding budget line.

In a parallel effort, we will be deploying Surveyor class drones equipped with industry-leading bathymetric sonars and acoustic arrays this year as well. The former will generate detailed ocean floor maps while the latter will locate and classify surface and subsurface vessel traffic. Both capabilities are essential for strategic overmatch in the Pacific and Atlantic theaters of operation, yet are in short supply due to limited numbers of manned assets to carry these sensors. Saildrone provides the ability to dramatically expand the deployment of these and other capabilities around the globe, at scale, more affordably, and in a persistent fashion – while also being highly adaptable to emerging challenges and lessons learned. This not only presents an extremely dynamic solution, but also has the potential to fundamentally transform our approach to naval warfare in the near term. Building and deploying these systems ahead of a high-end conflict, however, is essential.

While Saildrone USVs are highly capable, I want to emphasize that they are not a replacement for manned ships. The United States should continue to build traditional platforms crewed by our highly capable Navy sailors. Saildrones are designed to free up valuable manned assets by performing tasks that do not absolutely require people, such as persistent wide-area surveillance in remote areas. Allocating drones instead of ships increases the efficiency and effectiveness of the Navy's manned fleet by allowing it to focus on more exquisite mission sets, like ballistic missile defense.

#### Transformational Technology is Ready for Large Scale Operations

The commercial sector is developing and providing cost-efficient, alternative technologies to transform the battlefield. These are not futuristic concepts or theoretical warfighting strategies – they are tangible, field-ready solutions available now. Saildrone's

technology isn't just preparing for tomorrow's conflicts; it's primed and ready for the fight tonight.

I appreciate the work this Committee and DOD has done to foster this innovation. A great product of that work is the Defense Innovation Unit (DIU) which has been a tremendous partner for us. DIU's capability-focused approach to solving the warfighters' challenges allowed us to explore the military use cases for our vehicles. DIU has created an ecosystem that encourages truly innovative solutions and has been instrumental in allowing companies like Saildrone to bring creative, effective solutions to complex defense challenges. DIU contracts have allowed for the testing and fleet integration in 4th and 5th Fleets. We have also had great success with the Office of Naval Research (ONR) for experimentation.

Other Transaction (OT) agreements, another authority provided by this Committee, have been crucial to continued support of the DOD. OTs have allowed DIU to contract with us quickly, taking advantage of our mature and fleet ready capabilities. OTs are a great tool for spurring innovation rapidly.

At this point, we have proven our technology in partnership with DIU and ONR. We have deployed globally and integrated into the common operating pictures of commanders, becoming a cost-efficient operational asset. We are ready to be organically scaled and owned by the operational Navy. However, the current structures and limitations of DOD's acquisitions and budgeting processes present challenges for both the services and innovative companies like Saildrone. These challenges make it difficult to provide advanced solutions at scale within timeframes that align with the rapid pace of technological advancement. The speed of innovation and the rigidity of the budgeting process impact the timely delivery of cutting-edge technologies to the warfighter.

### Acquisition Should Match Speed of Innovation

The speed of innovation – particularly in the unmanned space – vastly outpaces the traditional acquisition process in most cases. What is current today may be generations behind in several years' time. Consequently, the standard years-long procurement cycle that works for larger assets like aircraft, ships, and submarines is often not compatible with the speed of innovators like Saildrone who are rapidly bringing new, and highly relevant, capabilities to the front lines today.

For example, in Ukraine, we understand there is about a six week time period from when a new technology is fielded and when the Russians deploy a requisite countermeasure. Ukrainians have no choice but to continue innovating in anticipation of the next countermeasure. While the Ukrainian government has had no option but to adopt this fast innovation cycle, the takeaway is that adversaries are always close behind and technology is becoming obsolete at a record pace on the modern battlefield. Contracting vehicles must be agile to allow for rapid adjustments based on learning and evolving needs.

### Budgeting Should Accommodate Rapid Innovation

With DIU support, Saildrone rapidly developed and demonstrated capabilities that addressed an urgent warfighter need in 4th Fleet. Our unmanned surface vehicles proved their value, underwent metric-based evaluations, and generated consistent demand from Navy Fleets for increased deployment in future years. Our unmanned surface vehicles continue to rapidly evolve their capabilities, due to high cadence, year round operations, while facing real adversaries. In my view, only in the face of real, long duration deployments will solutions reach full maturity and utility.

However, despite proven performance, demonstrated cost efficiencies, and multiple requests for Saldrone services from different fleets, the service level budget process lacks the flexibility to organically adopt and scale these new capabilities in the near term.

The current POM process requires funds to be requested multiple years in advance of the money being spent. This creates a multi-year gap between innovative solutions being validated, to when they might be deployed at scale. The classic valley of death paradigm.

### Budgeting for Innovation Needs a Bridge

To address this challenge, I ask you to consider the creation of a dedicated “bridge fund” within a service's budget, to fund the immediate roll out of new technologies that are proven effective through existing programs like DIU, have adequate demand signals, and are being included in a service’s future POM submission. DIU has greatly increased DOD’s ability to rapidly find and field commercial technologies. Now, the services need an ability to immediately scale those solutions that are deemed effective and they must be able to do that ahead of dedicated appropriations arriving years later.

Critically, this fund would not be intended for research and development (R&D) or expanding funding for existing programs. A “bridge fund” instead would specifically address the valley of death years between validation of technology and the appropriation of budgets arrival two years later.

This approach would solve two of the most significant pain points of the current budgeting process. First, services would benefit from two years of additional operational experience while the budgeting process plays out. This technical de-risking is essential to enable bold budget decisions, which will be critical to modernizing the future DOD. Second, privately



funded companies would have headlights for near term growth, enabling additional capital investment, scaling of inventory and manufacturing facilities, as well as internally resourcing continued capability development.

## **Conclusion**

It is now widely accepted that commercial technologies will play a vital role in helping DOD meet the challenges of the present and future. However, without allocated funding for the time between experimentation and operations, these commercial solutions will die on the vine and never make it into service.

I would urge the committee to embrace the bridge fund concept at the service level, which could radically accelerate the fielding of new technologies, and capitalize on the good work of DIU, and other R&D organizations.

We thank Congress, the Navy, and the Defense Innovation Unit for their incredible leadership and support for fielding unmanned autonomous systems. I appreciate the opportunity to testify today and express my views on this important matter on behalf of Saildrone.