Statement of

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Introduction:

Thank you, Chairman Gallagher, Ranking Member Khanna, and Members of the Subcommittee, for providing me an opportunity to testify today and discuss how the U.S. commercial sector is building, developing, and operating transformative capabilities to collect maritime security data that can increase mission effectiveness of the military services.

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, DC. Saildrone is the world leader in providing ocean data solutions with autonomous uncrewed surface vehicles, offering unrivaled payload, range, and reliability. Saildrone uncrewed surface vehicles (USVs) have sailed more than one million nautical miles and spent more than 30,000 days at sea collecting weather, climate, 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 different applications, including meteorological and oceanographic data collection, ocean mapping, and maritime domain awareness. Saildrone currently employs more than 230 people and has ongoing global operations supporting missions 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.

Saildrone data collection is cost effective, and the data is of the highest quality, as verified by U.S. government customers. As the only small autonomous USVs capable of long-endurance MDA missions, the technology is extremely mature and recognized as Technology Readiness Level-9 by our federal customers. Saildrones are provided as-a-service

and do not need to be purchased. Instead the USVs are piloted and maintained by Saildrone while the USG customer has direct access and secure control over the data flow from the vehicle.

Saildrones utilize machine learning to deliver autonomous, real-time visual detection of targets, including those that are not otherwise transmitting their position. These detection events are then fused with other data —radar, automatic identification system (AIS), and acoustics—to deliver a fully informed picture of the surrounding maritime domain. This results in a persistent, rapidly scalable, low-cost solution to augment traditional manned maritime fleets – particularly for the U.S. Navy.

Commercial Innovation:

The commercial sector is developing and providing cost-efficient, alternative technologies to enable better observation of the ocean domain. Saildrone's uncrewed surface vehicle (USV) technology represents a paradigm shift in terms of the ease, efficiency, and cost of ocean monitoring. They can do many of the same jobs as traditional assets, with the same cutting-edge hardware and sensors, but at a fraction of the cost and carbon footprint.

Until recently, the ability of the government to test, adopt, and integrate new observing technologies was made difficult due to the initial large capital expense necessary to acquire and fully missionize the asset before it could really provide any value. In contrast, Saildrone USVs are provided as-a-service and do not need to be purchased unless desired. Our USVs are piloted and maintained by Saildrone, thereby shifting the burden of operation and risk to the private sector, while the U.S. government customer has direct access to and secure control over the data flow from the vehicle. By relying on the private sector to pay for the expensive infrastructure and shoulder the operational risk in certain circumstances, this type of public-private partnership

framework provides great opportunity and value to the government and agencies like the Department of Defense.

Operational Experience:

As previously stated, Saildrone serves customers across the federal government on civil and defense related missions. In the national security arena, Saildrone has operated continuously for the Navy's 5th Fleet in the CENTCOM area of responsibility (AOR) for nearly two years. Over this time, Saildrones have provided more than 30,000 hours of persistent maritime domain awareness where the availability of traditional manned ships is limited. While on station with Task Force 59, saildrones have detected and classified many thousands of surface vessels, allowing the Navy to greatly enhance its common operating picture while keeping sailors out of harm's way. Saildrone's automated tracking and reporting of vessels to command centers has proven that manned ships are no longer necessary for traditional watchstanding.

In addition to providing domain awareness, past missions with U.S. law enforcement partners have demonstrated that saildrones can be a strategic deterrent in places known for illicit trafficking. In areas where saildrones are conspicuously stationed, there have been considerable changes in behavior. Specifically, operators have witnessed dramatic shifts in traffic patterns away from Saildrone's mission areas. This disruption is costly to illicit actors and provides a significant strategic advantage for law enforcement.

With this in mind, the Navy has expanded its autonomous surface fleet to the SOUTHCOM AOR. Under 4th Fleet's command, 10 Voyager class saildrones will provide maritime domain awareness in the Caribbean to assist with drug trafficking interdictions. This is an area where the availability of manned Naval assets has been in high demand, yet low in

supply. Saildrone's long endurance autonomous fleets are now allowing the Navy to satisfy a longstanding requirement while preserving its manned ships for other priority missions.

Operational Integration Is Essential for Honing Capabilities:

The quickest way to innovate and expand our competitive edge is through operational fleet integration in permissive and semi-permissive environments. Missions in SOUTHCOM, NORTHCOM, and EUCOM provide fertile ground for testing, hardening, and integrating systems before deployments to hotly contested areas. Lower-intensity operations allow space to provide real-time upgrades to hardware and software based upon operator feedback, which is essential for ensuring integrity and interoperability when deployed in a wartime environment.

Whether on a counterdrug mission, guarding maritime perimeters, or countering illegal, unregulated, and unreported fishing (IUU), each vessel detection enhances Saildrone's machine learning-based capabilities. The ML architecture learns with each image, radar, and acoustic signature it collects, thereby constantly honing its ability to detect and classify surface vessels. Thus, more frequent and expansive operations in the immediate term will accelerate preparedness for higher intensity missions in the future.

This is true also for partner nations. It is in America's interest to equip other nations with autonomous USVs to expand the collective security footprint. As with our own national security apparatus, testing and integration with allied forces should begin now. The Defense Department should consider the authorities and funding associated with 10 U.S.C. §333 and 10 U.S.C. §284 to encourage and assist those nations where necessary.

Scaling to Meet Fleet-Wide Requirements:

The ability to rapidly scale small autonomous USVs is an extraordinary advantage not typically found with larger crewed assets. This is the unique benefit that commercial systems

provide, whether under a contractor-owned, contractor-operated or government-owned, contractor-operated model. The U.S. and its allies lack the number of assets necessary to monitor surface activity – both friendly and adversarial. The requirement cannot be addressed with manned ships alone – nor should it. It is too expensive and would take too much time to scale. Both time and money are in limited supply. Scaling small autonomous systems is the only reasonable path to acquiring an expansive operating picture of the surface environment.

If DoD wants to expand its competitive edge against our adversaries, and deploy systems within 18-24 months, it should begin by scaling proven technology that is productionized and tested, with proven utility. Industry is ready to respond, but the Department should provide sufficient lead time to ramp capacity and acquire materials. Deploying thousands of attritable autonomous systems inside two years requires contracts now. It is not possible to achieve this goal with infinite testing of new things and protracted contracting timelines.

It is likewise difficult to transfer technology, with proven utility, into ongoing operations without dedicated funding and corresponding program elements (PEs). Currently, there appears to be no specific budgetary allocations for autonomous surface MDA beyond those driven by congressional interest. In order to field these critical technologies over the next 18-24 months, the Department should immediately identify current funding to deploy mission ready systems for use by the combatant commands, and propose specific funding for such deployments in its fiscal year 2025 budget request. Budgeting for these systems cannot rely on the traditional Program Objective Memorandum process, which takes far too long, often multiple years, to unfold. In the meantime, Congress should strongly consider allocating additional funding in FY24 and encourage the Department to reprioritize amounts from other programs that are less successful.

Saildrone has productionized its systems and can scale to meet global fleet demands. It has a distributed manufacturing base in California, Alabama, Mississippi, and the State of Washington that is prepared to significantly increase production. Saildrone demonstrated its swift response for the Navy this year, when it assembled and shipped its fleet of 10 Voyagers for 4th Fleet within 5 weeks of being placed onto contract. Within 10 weeks, those saildrones will be on-station. This is likely the quickest the Navy has ever commissioned and operationalized a surface fleet.

While commercial entities like Saildrone are prepared to meet demand, it cannot happen overnight. They must acquire materials, expand production lines, and hire staff where necessary. Deploying hundreds or thousands of systems *next year* requires contracts *this year*. The Defense Department can and and should move quickly.

The Navy has demonstrated that it can integrate proven systems into its fleet architecture without the need to replicate TF59. 4th Fleet, for example, did not create a new autonomous capabilities office before deploying Saildrone's Voyager fleet. It leveraged existing contract processes at NAVSEA and the Defense Innovation Unit and assigned operational control to the Fleet. A system whereby the Navy centrally allocates proven autonomous systems to its fleets should be a model for future data acquisition. It would not only streamline the contracting process, but it would also create a single point of responsibility that Navy leadership can oversee and from which to demand swift results.

Conclusion:

It is now widely accepted that commercial technologies, such as USVs, and commercially-provided data will play an increasingly important role in helping the Navy meet its maritime domain awareness mission requirements. Change is never easy for a large institution,

but the Navy has been a great partner and has shown what can be accomplished with forward-thinking, senior-level engagement. A key to the success of this new paradigm will continue to be making contracting swift and agile in response to the rapidly changing technology climate without sacrificing good oversight of the use of taxpayer dollars.

We thank Congress, the Navy, the Defense Innovation Unit and the Unmanned Task Force 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.