



Putting Leadership Into Action to Achieve National Security

Swiftships' Marching Towards Naval Supremacy

Swiftships continues to accelerate ahead of the shifting currents in military watercraft complex demands. With a \$1.3B backlog in play, the Louisiana shipyard is at the heart of technological advancements that foresee 3D printing of repair parts and the development of ever more intelligent and secure multi-mission unmanned vessels. Cricket loving CEO Shehrazee Shah "pads up at the Swiftships' crease" to reflect on a remarkable year with Andy Probert.

Well-known for its robust and durable vessel designs, and gold standard reputation for vessel sustainment programs with the United States Navy (USN), the Swiftships team refocus on emerging technologies to provide futureproof solutions to its client missions and stay ahead of the competition.

"We have active programs in four continents, including being a platform provider-of-choice for the USN and trusted

co-production partner for allied nations," said Shah. "While the industry slowly shifts course, Swiftships – with \$1.3B in backlog orders – continues accelerating."

Louisiana-based Swiftships is a globally respected Original Equipment Manufacturer (OEM) for mission-critical maritime products and services. Their portfolio encompasses innovative vessel designs, proven hulls, quality shipbuilding and mission-critical systems integration practices, supplemented by Maintenance, Repair and

Overhaul (MRO) services and in-house Research, Development and Innovation (RD&I) capability, ensuring Swiftships remain at the state-of-the-art of military watercraft evolution.

Turning dreams into action for digital shipbuilding

In furtherance of Shah's vision, Swiftships has rapidly expanded Research and Development (R&D) activities, partnering with Lockheed Martin, L3 Harris, Raytheon Technologies, and Serco to support a wide range of cutting-edge programs.

"Swiftships' exemplary ratings with the USN and other agencies of the United States Department of Defense (DoD) have intrigued Large Systems Integrators (LSIs) to partner with us on the mission to enhance how coastal borders are governed," Shah quoted.

A new Swiftships collaboration with Lockheed Martin for the 3D printing services of repair parts in remote locations has excited the industry. The program will enable the United States Marine Corps (USMC) to utilize components printed on demand, such as engine parts, from either fiberglass or stainless steel.



Serial Production of Swift 28m CPC



Swiftships MRO Offering to Lockheed Martin's MMSC

"The on-demand 3D printing of repair parts will be a massive advantage and offers exciting capabilities in vessel maintenance support," Shah explained. "We have also looked at technology applications for producing kits using 3D printing in support of our co-production programs."

Revolutionary shipbuilding "already in action" is a gamechanger for Swiftship's current mega-scale MRO contracts and soon-to-be-expected awards.

"Combined with our custom-built Enterprise Resource Platform (ERP), additive manufacturing will forever reshape the shipbuilding industry, offering critical parts availability, improved fleet readiness, and cost-effectiveness," Shah added. "And all, just in time, as global distractions has led to ever-high inflation and unprecedented supply chain challenges." Swiftships strategy is to combine cutting-edge technology with its proven vessel sustainment methodology and localization expertise and enable optimal operational readiness for the US and partner navy fleets. ▾



U.S. Marine Corps, 35-foot Expeditionary Littoral Craft (ELC) RELIABLE MARITIME SYSTEMS

Intelligence to mission systems

The Intelligent Supply Chain Management System (SCMS), built on Web 3.0, is a platform that monitors systems designed for the age of machine learning and the industrial Internet of Things (IoT). The system performs all the monitoring and control functions of a traditional Integrated Platform Management System (IPMS) while unlocking platform data to improve mission effectiveness and improved Continuous Lifecycle Management (CLSM).

SCMS Key Features & Benefits: It is a scalable edge and cloud computing architecture enables continuous development and integration of advanced systems, such as optimal supervisory control with integrated bridge systems, reliable automation through edge, hub & cloud access to platform data coupled with advanced digital twins simulation allows end-users to optimize operations planning: state-of-the earth monitoring, system/equipment optimization, predictive maintenance; prognostics, advanced autonomy; remote system monitoring, data analytics, and command and control; supports open Continuous

Integration or Continuous Delivery (CICD) workflows for rapid lifecycle upgradability; effectively integrates Energy Storage Systems (ESS) and automates Integrated Maintenance System (IMS) architectures.

Unmanned vessels proving their worth

Swiftships has pioneered in multiple disciplines helping the USN to speed up the development, testing, and deployment of different sizes of Unmanned Surface Vessels (USVs) into its fleet. Swiftships started investing in testing autonomous platforms long before 2015, and its name became central to conversations around militarized unmanned platforms since the US Navy's 2018 selection of the Swiftships' Riley Claire – a 175 feet Fast Supply Vessel (FSV) – for transformation into a Large Unmanned Surface Vessel (LUSV), named "Nomad."

Today, alongside L3 Harris (as a Prime), Swiftships continues to build Medium Unmanned Surface Vessels (MUSVs). "This is a first-of-its-kind vessel to meet current and future changing needs and

the shift towards more autonomous craft," Shah said. "Adopting a MUSV platform enables every military customer to make their own decisions on what they require."

"Our partnership with L3 Harris has provided a huge advantage for Swiftships as the MUSV platform has rapidly improved. The Navy is delighted with the progress of the design, and the prototype is underway."

Nomad again captured audience attention and highlights the potential for FSV platforms' conversions to militarized vessels as she participated in the Rim of the Pacific Exercise (RIMPAC), the world's largest international maritime exercise



Nomad in Multi-National Rim of the Pacific Program

with the participation of 26 nations, 38 human-crewed and unmanned ships, submarines, aircraft, and 25,000 personnel.

During the exercise, Nomad and other unmanned vessels showcased the potential to extend the capability of connected manned platform sensors to enhance fleet capacity across the multinational force. Nomad has already travelled from the Gulf Coast through the Panama Canal to the US West Coast, a total of 4,421 nautical miles,

with 98% of that distance in autonomous mode in 2020, proving endurance and interoperability with the government's command, control, communications, computers, and intelligence systems.



FSV Riley Claire Prior to Converting to Nomad

"The triumph of Nomad has sparked global commercialization interest in similar autonomous and lightly-manned vessels," Shah related. "We've been approached to pitch this technology to other potential customers worldwide, who see it as an opportunity to expand upon their existing capabilities without the usual high manpower demands and capital costs."

This enabling technology has increased the autonomy, reliability, and endurance of unmanned systems, particularly those operating in maritime domains such as Unmanned Surface Vessels (USVs). We offer platforms that enable robust perception for situational awareness in littoral environments. Swiftships self-awareness of the state of the unmanned system's mechanical and electrical systems and responsible, autonomous decision-making in an open, dynamic world allows it to have a nifty future. ▾

“We took a closer look at representative mission profiles and identified key market/technology gaps for small craft. We developed a low-cost, multi-mission capable 35-foot Expeditionary Littoral Craft (ELC) with a top speed of over 45 knots.” said Shah.” The USMC tested our prototype, and the client was delighted that Swiftships exceeded specified requirements by over 30%.” This ELC is a revolutionary platform due to its extreme endurance, high speed, minimal signature, and ability to support manned/unmanned assets and affordability.

“This reflects the broader industry in which nations want smaller, agile, and faster vessels that can be constructed in 60-90 days and high volume. That has ramped up excitement at Swiftships; we are taking large vessel orders and also focusing on small craft programs,” Swiftships President and co-owner Mr Jeff Leleux expanded. “Moving deeper into the high-speed craft business with greater volumes and faster turnarounds allows us to test new technologies shaping the unmanned market. We are taking on several new initiatives with our partners and enhancing our vessels with the capabilities of their advanced systems.”

Earlier in 2022, Swiftships unveiled its 46’ Small Unmanned Surface Vehicle (SUSV), aka “Challenger,” to support the growing needs of the defense industry. The craft is built on a proven high speed, American Bureau of Shipping (ABS) approved platform that has served in various military and commercial engagements for over 20 years. The missions include strategic strike and mine

countermeasure/sonar deployments and the associated mission profiles comparable to or exceeding our competitors’ capabilities.



Swiftships Challenger with Game Changing Capabilities

Expanding facilities to support active programs

Swiftships’ acquisition of a long-term lease of the Old McDermott facility in Louisiana has proved critical to its sustained growth. They have ramped up production there for constructing the USN’s Landing Craft Utility (LCU)-1700 boat, the Medium Unmanned Surface Vehicle (MUSV), and overhauling the US Army’s LCU-2000 boat.

Elsewhere, Swiftships has an ongoing contract for the Egyptian Navy’s (ENs) 28m Coastal Patrol Craft (CPC) program. Shah said: “We signed two new contracts



Swift Planning Yard Services Enable Efficient Local Production

in 2022 for 16 craft to EN co-production count. That will make 49 CPCs delivered to EN by the end of 2027, and the 28m CPC is the most-built patrol vessel in its class."

Shah added: "The Egyptian Navy has advised us they will need at least fifty (50) 28m CPC in their fleet to support their mission profiles and populate their new naval bases in the Red Sea and the Mediterranean."

The company is co-producing twenty 38m Gunboats (GB) for the Pakistan Navy's new advanced fleet, including a new requirement for two 1,500 Tonne Corvettes for their "Combined Task Force (CTF) 151" mission as part of a multinational task force with Allied Forces.

The Louisiana yard also resourced a support contract from the Iraqi Navy with Spares and Lifecycle Support for its naval fleet and receives inquiry for MRO services and new 45m Fast Patrol Vessel (FPV) construction.

A global powerhouse

"Swiftships is looking at a very positive growth with more vessel orders, co-production programs and MRO efforts," said Shah. "Talks are ongoing over a new

35m FPV, a 45m Patrol Boat for Azerbaijan Navy, the Dutch Navies Rapidly Increased Firepower Capability Royal Netherlands Navy (TRIFIC) Program, and USN 85m Littoral Mission Support."

Other global successes include Swiftships' partnership with Lockheed Martin through a joint venture with the Saudi Arabian military industry to provide MRO efforts in support of



35m FPV reaches millions in NAVDEX, Abu Dhabi

the Royal Saudi Naval Force's Multi-Mission Surface Combatant (MMSC) Tuwaiq class.

"We also see some Crew Transfer Vessel (CTV) opportunities to support the growing windfarm market off the US coasts that could come to fruition." In addition, Swiftships has entered the crypto-rigs development market to customize Bitcoin rigs for its global partners, using its manufacturing and industrial capability to customize rigs for clients worldwide.

Swiftships has a comprehensive view of the entire shipbuilding lifecycle as part of its unwavering commitment to helping its customers succeed. "We have the required skillset," said Shah, "and experience to extend our vessels' lifecycles and address the critical needs to maintain, repair, and



Keel Laying Ceremony for 38m Gun Boat, Karachi

convert them as our customers' requirements dictate."

Shah reflected, "Change is imminent, as sustainability is widely regarded as the next big revolution since the shift to autonomous tech is disrupting the way shipbuilding used to be done. Extra pressure is falling on shipyards to own sustainability. But more understanding must occur before an enterprise can even consider adopting a sustainable-first strategy.

"Swiftships' ability to use advanced technology has enhanced its backbone that integrates data and project management tools and empowers our managers. Undoubtedly, these advances will make us smarter, stronger, and more competitive for a sustainable tomorrow."

Shah concluded: "Swiftships has been fortunate to have world-class partners and suppliers by our side. With these suc-

cesses, Swiftships continues to evolve as a global maritime powerhouse.

"We have used new methods and tools for modelling, simulation, and data analytics to build a cradle-to-grave digital infrastructure with cutting edge design, delivery, and low total ownership cost of platform. Our design helps clients implement Model-Based Systems Engineering (MBSE) practices for requirements definition and product development, increasing the effectiveness and affordability of the systems needed for national security."

Reliable and safe maritime systems

Swiftships systems offers enhanced safety and reliability for these platforms. These systems automatically detect objects on and just below the surface of the water, day, or night, and in most weather conditions, by



Fast Patrol Vessel Bridge, Comm and Control Systems



Swifts and KS&EW Optimized 38m Gun Boat Design for Serial Production

fusing sensor data from multi-spectral cameras and radar using reliable and validated artificial intelligence algorithms. The systems are being rigorously tested in the rivers of the Atchafalaya Basin and evaluated for operation in cluttered littoral environments with dynamic atmospheric and wave conditions, dense vessel traffic, navigational markers, shallows, and other exclusion

zones. Numerous applications include several areas: perception for USVs and Autonomous Surface Vessels (ASVs); a multi-sensor Intelligence, Surveillance, and Reconnaissance (ISR) package with automated change analysis; persistent watch standing to augment crewed vessels; remote situational awareness with automated alerts and warnings; and port and harbor security with the integrated vessel and activity tracking.

The ultimate goal of both “unmanned” vessels and manned vessels such as amphibious vehicles is unparalleled reliability and accuracy of perception to enable the system to “understand” the world around it. This goal is a crucial enabler of unmanned and reduced-manning vessel operations.

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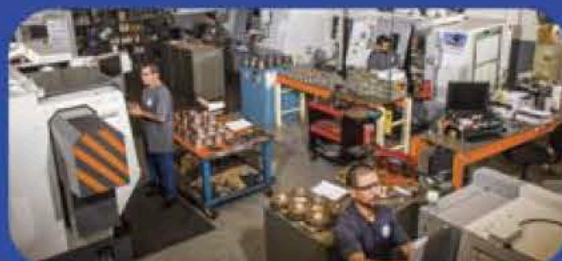
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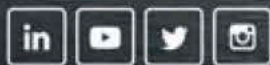
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