



# Importance of Submarines and the Submarine Industrial Base

## U.S. Navy Submarines

Major classifications of modern U.S. submarines:



**SSN** Nuclear powered attack submarine



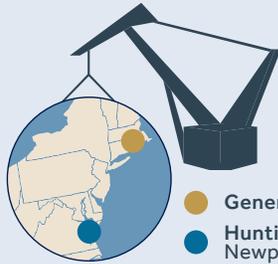
**SSGN** Nuclear powered guided missile submarine



**SSBN** Nuclear powered ballistic missile submarine

**SSN** and **SSGN** submarines give the Navy unparalleled stealth and strike capability to support Special Operations Forces and carry out intelligence, surveillance and reconnaissance missions. **The Los Angeles Class, Seawolf Class, and Virginia Class** submarines represent the SSN force currently deployed by the Navy, utilizing the most advanced undersea systems that American world-class science, engineering, technology and manufacturing can provide.

The current U.S. SSBN force consists of 14 **Ohio Class** submarines. Ohio Class SSBNs are specifically designed for extended deterrent patrols. Trident II D5 missiles with improved accuracy and range, efficient crew rotations and low maintenance demands maximize the SSBN's strategic availability as well as reduce the number of submarines required to meet strategic requirements and readiness.



# 2 SHIP YARDS

- General Dynamics—Electric Boat
- Huntington Ingalls Industries—Newport News Shipbuilding

# 25,500 PEOPLE



— CURRENTLY —  
**2,708**  
FIRST-TIER SUPPLIERS  
across nearly all 50 States

**\$23.0 BILLION**  
to local economies across nearly all 50 States over the past 5 years

“ If you asked me, if I could give you another ship today, what would it be? **It would be a VIRGINIA class submarine.** ”

*HASC, February 27, 2020, Admiral Michael Gilday, Chief of Naval Operations*

## Strategic Value and Nuclear Deterrent

An effective nuclear deterrent prevents attacks on the U.S. from countries armed with nuclear and other weapons of mass destruction and is a national security imperative.

**SSBNs** are the most survivable component of the United States' nuclear triad— comprised of **submarine-launched ballistic missiles, land-based ICBMs and heavy bombers**. Deep in the ocean, with virtually unlimited endurance, these submarines are **capable of reaching any target** at the direction of the President.

**SSBNs** carry **70%** OF THE U.S. OPERATIONAL NUCLEAR DETERRENT ARSENAL, using only **1%** OF THE OVERALL DEFENSE DEPARTMENT BUDGET

# Future of Submarines and Importance of Investment

Our fundamental priority is to design and build the next generation of U.S. submarines while continuing to maintain and modernize the nation's submarine fleet. The submarine industrial base is committed to meeting the Navy's aggressive schedule and cost reduction goals, supporting three major lines of effort:

## Columbia Class Ballistic Missile Submarine Program

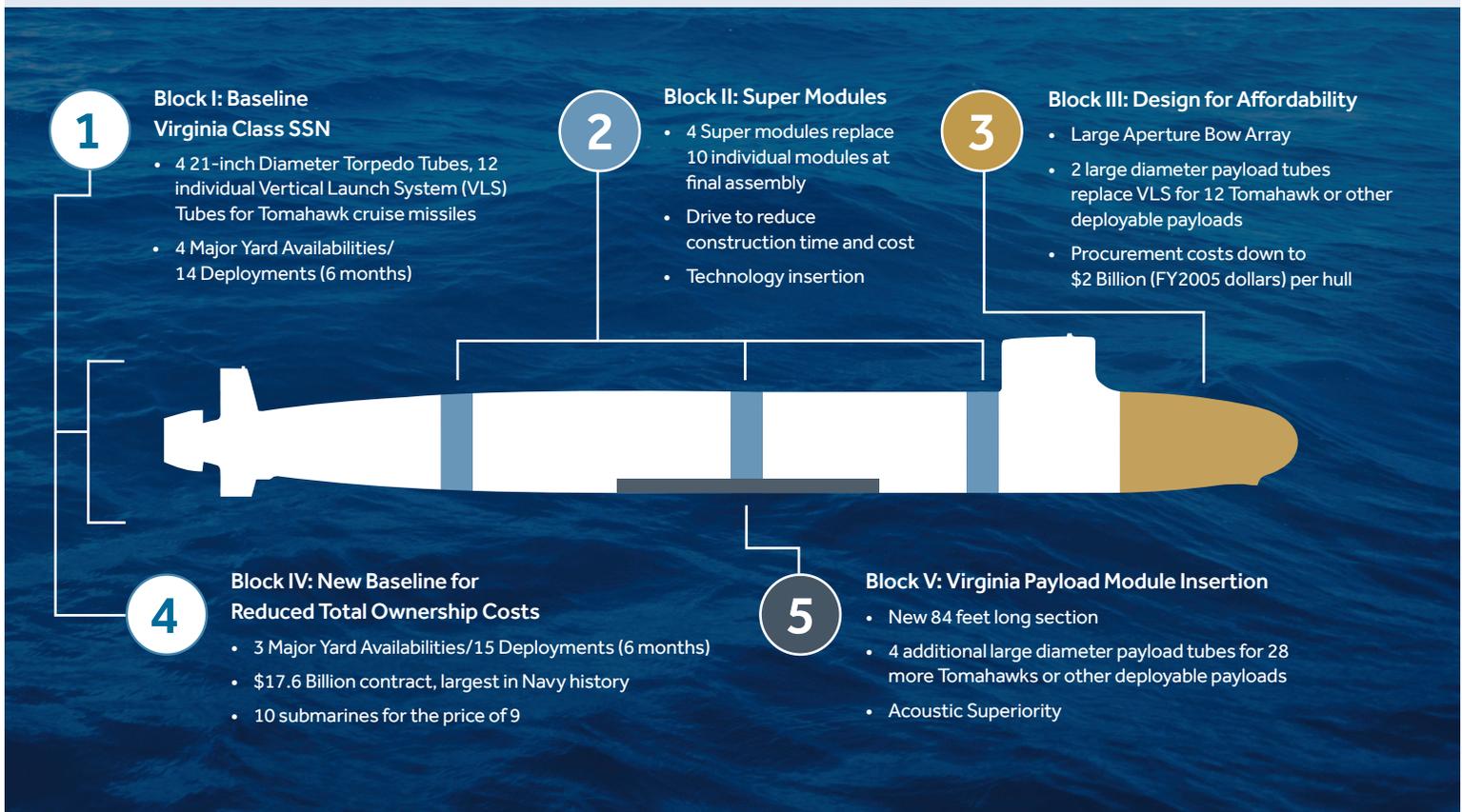
Due to expert engineering and maintenance, the existing Ohio Class SSBNs have already been extended to serve for 42 years, though originally designed for only 30 years of service. The time to build replacements is now. A minimum of 12 newly designed Columbia Class SSBNs will efficiently maintain the Navy's nuclear deterrent force into the 2080's, providing a credible strategic nuclear deterrent at the lowest possible cost. Construction of the first Columbia Class SSBN began in October 2020.

## Continued construction of multiple Virginia Class Submarines per year/Virginia Payload Module development

The Block V Virginia Class submarine contract was awarded in December of 2019 and construction of Block V submarines is in full swing. The Virginia Payload Module (VPM), a cost-effective way to preserve the U.S. critical strike capacity, will be introduced on the second submarine in Block V, and will be included on all follow-on submarines in the Block. Currently, nuclear-powered attack submarines (SSNs) and guided missile submarines (SSGNs) provide this capability using Tomahawk cruise missiles. When the last SSGN retires in 2028, the U.S. will lose 60 percent of its undersea strike capacity. VPM mitigates this loss of strike capability by adding 28 additional launch canisters per Virginia Class submarine. Additionally, Block V submarines include specific upgrades to address known threats from Russia and China, both of which have invested heavily in submarine technology and capability enhancements in recent years.

## Submarine Force Maintenance and Modernization

This crucial work maintains the nation's submarine fleet, industrial base proficiency and critical job skillsets. Continuous maintenance and modernization work sustains the stability and core competencies required to ensure a proficient workforce exists when the Virginia Class SSN with VPM and Columbia Class SSBN full rate production plans are executed.



## About the SIBC

Established in 1992, the Submarine Industrial Base Council seeks to educate policymakers and the public about the need to preserve the strength of the U.S. submarine force and promote the value of the submarine industrial base as a vital part of our national security. SIBC membership is open to the thousands of U.S. companies that provide critical materials to the U.S. submarine programs under development or in production. Member businesses range from the smallest specialty shops to manufacturers of main propulsion equipment.